

[1973-1974]



Rush
Presbyterian
St. Luke's
Medical Center

Graduate
Medical
Education
Bulletin

Rush-Presbyterian-St. Luke's Medical Center

1753 West Congress Parkway

Chicago, Illinois

942-5000

Incorporated 1969

(St. Luke's Hospital Founded 1864)

(Presbyterian Hospital Founded 1883)

(Rush Medical College Founded 1837)

Approved by

The Joint Commission on Accreditation of Hospitals

The American Medical Association for Internship and Residencies
for Physicians

The Department of Registration and Education, State of Illinois

The Liaison Committee of the American Medical Association

and the Association of American Medical Colleges

Member of

The American Hospital Association

The Illinois Hospital Association

The Chicago Hospital Council

The Blue Cross Plan for Hospital Care

Association of American Medical Colleges

Licensed by

The State of Illinois Department of Public Health

Academic Administration

Mark H. Lepper, A.B., M.D., Executive Vice President, Professional
and Academic Affairs; Dean, Rush Medical College

John S. Graettinger, M.D., Associate Dean, Office of Student and
Faculty Affairs

Robert W. Carton, A.B., M.D., Associate Dean, Office of Medical
Sciences and Services

William F. Hejna, B.A., M.D., Associate Dean, Office of Surgical
Sciences and Services

Max E. Rafelson, B.S., Ph.D., Associate Dean, Office of Biological
and Behavioral Sciences and Services

Henry J. Buhrmann, M.H.A., Assistant to the Dean, Academic
Administration and Hospital Liaison

Deborah L. Gerken, Administrative Assistant, Office of Student
and Faculty Affairs; Registrar, Rush Medical College

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In the Department and Section listings of the faculty-staff which follow, Departments in parenthesis refer to conjoint departmental appointments.

On the Cover

The abstract pattern on the cover is a digitized microscopic picture of a glomerulus. In the process of cytological pattern recognition, the computer represents the microscopic image as a two-dimensional mathematical matrix of gray levels. This matrix representation then is computer processed using algorithms to measure various properties from which qualitative and quantitative determinations of the specimen can be made.

The Medical Center

Rush-Presbyterian-St. Luke's Medical Center is one of the nation's outstanding institutions for patient care, extension of health care, medical education, and research. The Center has completed the first of two Phases of a \$91 million long-range plan to develop the first model of a complete health care system. This system will include—in addition to its acute-care referral hospital, Presbyterian-St. Luke's—a network of community hospitals, Rush Medical College, a research institute, the Johnston R. Bowman Health Park for the aging, a College of Nursing and Allied Health Sciences—plus pre-hospital health facilities, including doctors' offices, health maintenance organizations, and neighborhood health centers.

On September 27, 1971, Rush Medical College re-opened after 29 years of hiatus as a component of the Medical Center complex. Sixty first-year students, 32 third-year students, and six advance-standing students began training the first year. The size of the first-year class will be doubled by 1975. The Rush program is designed to encourage production of primary physicians.

An integral part of the Medical Center's commitment to a single system of comprehensive health care is a network of affiliated hospitals which will serve a specified population. First to join the network are Christ Community Hospital, Oak Lawn, Illinois; Community Memorial General Hospital, LaGrange, Illinois; Swedish Covenant Hospital, Chicago; and West Suburban Hospital, Oak Park, Illinois. The complete network will include approximately ten community hospitals and serve the health needs of an estimated one and a half million persons. These hospitals will, with the Colleges of Rush, provide opportunities for health science and service students to obtain training in a variety of settings in the community. The network also will provide opportunities for graduate medical education in both the Medical Center and affiliated hospitals. And a program of continuous education, available to all physicians on the staffs of the community hospitals, is being developed.

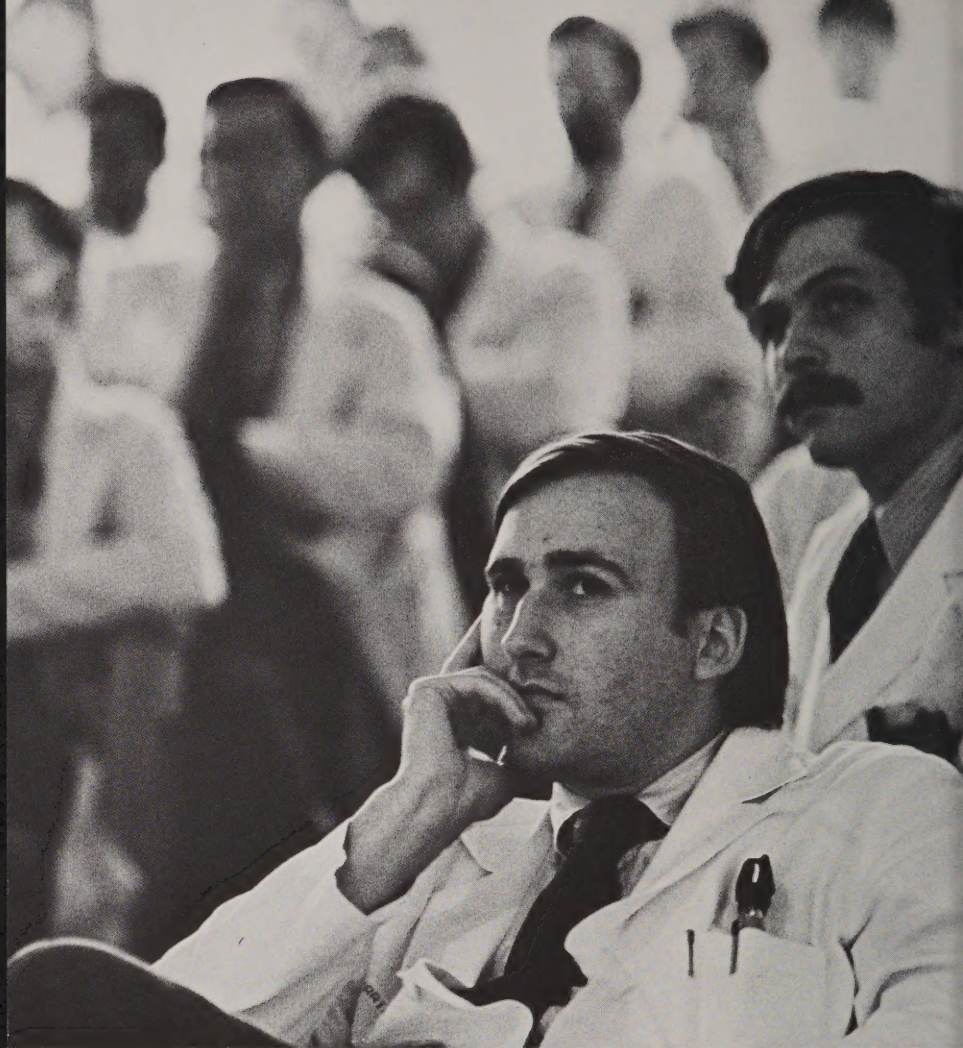
The Hospital

Presbyterian-St. Luke's Hospital has its roots in a century of community service, teaching and research of two voluntary hospitals. The original institutions were founded in 1864 (St. Luke's Hospital) and 1883 (Presbyterian Hospital) by a Protestant Episcopal minister and group of Presbyterian laymen, respectively. In July, 1959, physical merger into the new Presbyterian-St. Luke's Hospital in Chicago's Medical Center District was completed. Over the years, teaching affiliations have been with Rush Medical College, University of Chicago, Northwestern University, and University of Illinois.

Presbyterian-St. Luke's is a private, voluntary hospital with 833 beds and 85 bassinets. More than 30,000 patients spend approximately 280,000 patient-days each year under treatment and study by a faculty-staff of over 400 and a house staff of 170.

The research areas buttressing the clinical activities at Rush-Presbyterian-St. Luke's Medical Center include both major clinical and basic science investigation. By tradition, each patient in the hospital participates in the teaching program. The large number of beds assures adequate facilities so that within reasonable limits patients may be admitted regardless of source or comprehensiveness of economic support. Translated into action, this means that each patient has the concern of not only his attending physician but also of a graduate house staff. The large and active staff composed of both part- and full-time faculty members assures the presence in the hospital at all times of numbers of patients with all kinds of medical problems ranging from the acutely ill to the most intricate diagnostic and therapeutic problems. Our purpose is to continue to build on the best of the distinguished





tradition of the past to meet the ever-changing patterns of medical care, teaching and research.

Board of Trustees The Board of Trustees is composed of prominent persons who are active in the affairs of the city and state. These men are responsible for the continual development of the Medical Center to meet the health needs of Chicago and the Midwest. Clerical trustees, representing the United Presbyterian Church and the Protestant Episcopal Church, are responsible for the religious affairs of the hospital.

Woman's Board The Woman's Board has over 500 members who contribute time, service and funds. The intelligent cooperation and intense interest of these women are highly significant and of great importance to the successful operation of our voluntary institutions.

Outpatient Activities The outpatient facilities are called the Presbyterian-St. Luke's Health Center. Over 82,000 patient-visits per year to the clinics provide extensive opportunities for patient study. Each clinic is included in the house staff curriculum and is attended by staff members with particular interest and competence in its field of major concern.

Library House staff members have full use of the Rush Medical Library, which is maintained jointly by the Rush Endowment and the hospital. The library is supervised by a competent staff of medical librarians.

There are approximately 60,200 volumes in the library, 678 currently-received medical and related-fields periodicals, and 2,250 volumes of rare medical books. The Rush Medical Library is a member of the Midwest Regional Library Organization and takes part in the National Library of Medicine nationwide bio-medical communications network (inter-library loan documents are delivered daily by truck). The library also offers the services of MEDLARS (Medical Literature Analysis and Retrieval System) to all physicians and scientists of the Medical Center.

Philosophy of the Graduate Medical Education Program

Presbyterian-St. Luke's Hospital seeks excellence in patient care through authority and responsibility properly delegated to the house staff and complemented by an active teaching program and outstanding research facilities.

To accomplish these ends, an enthusiastic and efficient house staff is needed. The house staff is the central component of the patient care team. At all times, the house officer must be a gentleman, a scholar, and a good physician. By delegation, the house staff is responsible to the medical staff for everything concerned with the patient and his care.

The opportunities in Presbyterian-St. Luke's Hospital provide an unusually fertile soil in which to develop potential by working and reading. Assistance is always available and the house staff member has the responsibility of seeking it.

The hospital's objective is to spare the house officer as many routine duties as possible. It is hoped that every trainee will use the hospital's laboratory facilities for his own benefit and education. How much he uses them rests entirely within his personal choice.

First Year Programs

The first year of graduate education is the most critical for the new physician. Straight internships or residencies are offered in medicine, obstetrics and gynecology, pathology, pediatrics, psychiatry and surgery. First year house officers are appointed for a one year period beginning July 1. These programs are approved and accredited by the American Medical Association through its Council on Medical

Education and Hospitals.

Admission to a program requires that the candidate be a graduate of a Class A Medical School. The matching plan for first year appointments is followed in accordance with the National Internship Residency Matching Plan, Inc.

To apply for admission, a letter of application should be directed to the chairman of the appropriate department.

Advanced Programs

Presbyterian-St. Luke's Hospital is approved by the American Medical Association, the American College of Surgeons, and the various specialty boards for residencies in the following:

Anesthesiology	Neurology	Pediatrics
Cardiovascular-Thoracic Surgery	Neurological Surgery	Plastic and Reconstructive Surgery
Dermatology	Obstetrics & Gynecology	Psychiatry
General Surgery	Ophthalmology	Diagnostic Radiology
Internal Medicine	Orthopedics	Therapeutic Radiology
	Otolaryngology	Urology
	Pathology	

Opportunities for resident training in these specialties are available to the physician who completes his first graduate year with credit in Presbyterian-St. Luke's Hospital or elsewhere. Residents are appointed as assistants or instructors on the Medical College faculty. Applications for residency programs should be directed to the appropriate department chairman.

Fellowships

Many clinical and research fellowships are available in the clinical departments. Basic science research fellowships also are offered. Inquiries should be addressed to the appropriate section or department chairman.

Family Practice Training

The Department of Family Practice of Rush Medical College will arrange individual programs for physicians who wish to have broad training in primary care with the chairman of various departments in the medical college and the various affiliated hospitals. The recommended first year of this program is a medical internship. To apply for admission, an application should be sent to the Chairman, Department of Medicine.

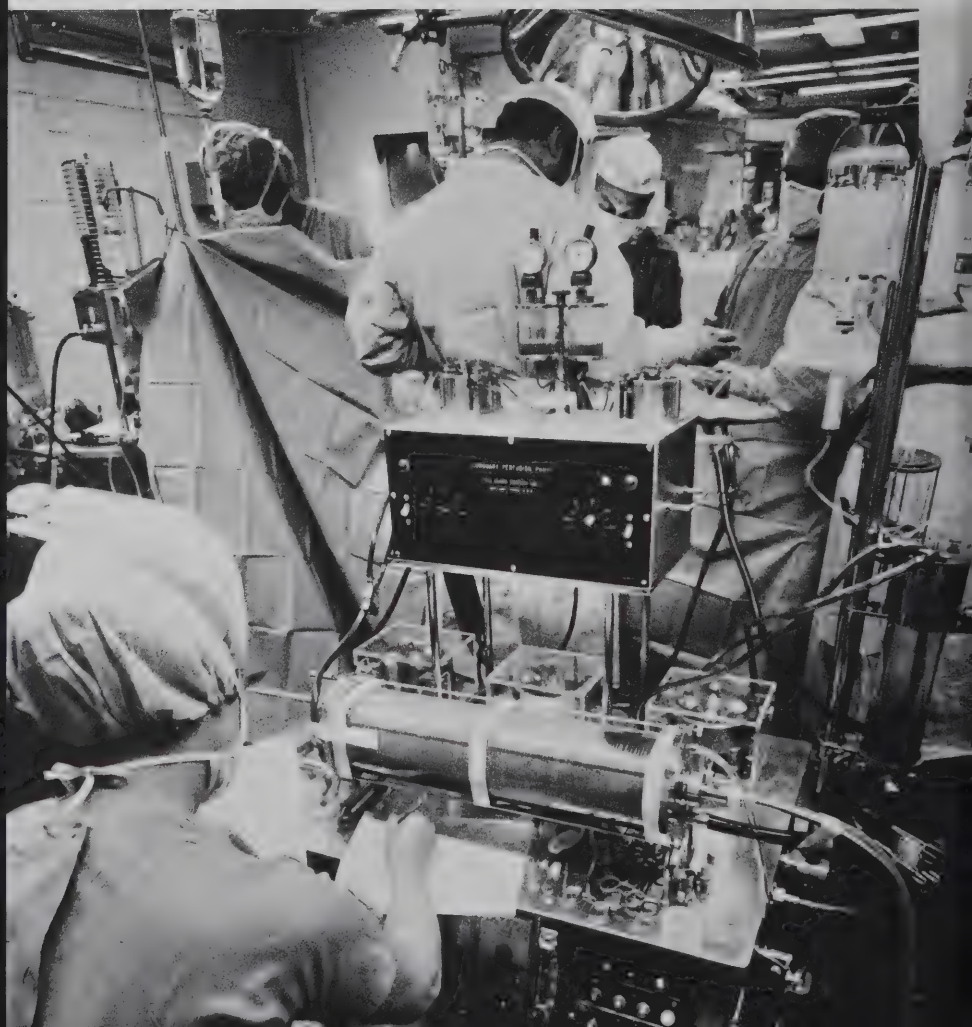
Policy Regarding Discoveries and Inventions

Section 1. Any discovery or invention (a) which is the result of research carried on by or under the direction of any employee or members of the medical or scientific staffs of the hospital and having the costs thereof paid from hospital funds or from funds under the control of or administered by the hospital, or (b) which is made by any employee of the hospital as a direct result of his duties with the hospital, or (c) which has been developed in whole or in part by the utilization of hospital resources or facilities, belongs to the hospital and shall be used and controlled in ways to produce the greatest benefit to the hospital and to the public.

Section 2. Such discovery or invention must be submitted to the hospital Committee on Research and Education for study as to disposition and recommendation to the Board of Trustees.

Section 3. The Board of Trustees may direct that such discovery or invention be:





- (a) Released outright to the discoverer or inventor.
- (b) Retained by the hospital in its own right.
- (c) Released to the individual or agency sponsoring the research under which the invention or discovery was made, if such action is required under the terms of the research contract with such agency or individual, or is required by law, or if the interests of the hospital and the public so indicate.

The discoverer or inventor may be required to apply for a patent and assign his interest therein.

Section 4. In the event that income is received by the hospital from any patent assigned in accordance with the preceding paragraph, all costs of procuring and administering such patent shall first be paid from such income. A proper share of the remaining net income shall be paid to the inventor or discoverer. This share is to be determined solely by the Board of Trustees, after considering the recommendations of the Committee on Research and Education.

Section 5. Contracts or grants from outside sponsors which carry the provision that the sponsoring agency may determine the disposition of patentable discoveries developed thereunder may be accepted by the hospital, when required by federal statute or the established policies of the sponsoring agency, and when that agency is governmental or non-profit in character, and when the action of the hospital in waiving its rights to such discoveries is determined to be clearly in the public interest by the hospital.

Generally, if patentable discoveries result from research sponsored by an agency outside the hospital, preferential treatment in the use of any resulting patent may be accorded that agency.

Section 6. The foregoing stated patent policy shall not be construed to include the ownership of copyrights, or of inventions or discoveries made by employees of the hospital entirely outside of their duties with the hospital and without the use of hospital facilities, resources, or financial support.

Health Services

Complete health services are available coordinated by an assigned internist in the House Staff Health Service office in the Department of Medicine. A preliminary physical examination is made at the beginning of a house officer's period of service. House staff members may at any time consult the personnel physician or any other staff physician. The personnel physician will assist in the selection of consultants if such assistance is required.

All house staff officers and members of their immediate families are offered Blue Cross Hospitalization Insurance. This insurance is paid by the hospital. Outpatient services and drugs from the hospital pharmacy are provided to house staff officers and their families without charge.

Vacations

Interns and residents are granted three weeks of vacation. Vacations may not be taken during the first or last month of the academic year and, therefore, should be planned between August 1 and May 31. Vacation time may not be accumulated from year to year.

Housing

The hospital maintains two apartment buildings on its grounds. All apartments are completely furnished. Parking is available in hospital parking lots near the building. In addition, the hospital holds a limited number of apartments in a new building constructed by the West Side Medical Center Commission adjacent to the hospital area. The hospital will make every effort to assist house staff members who must live away

from the hospital to find suitable housing.

House Staff Organization

The house staff meets monthly to discuss affairs of mutual interest. The organization with its elected officers participates in establishing house staff policy and organizing the social activity of the house staff during the year.

Licensure

Interns are considered to be enrolled in a course of instruction and therefore are not required to obtain a license because they are not practicing medicine.

All persons practicing medicine in Illinois must have a Certificate of Registration, either permanent, temporary or limited from the Department of Registration and Education. The Department stipulates that "a license (certificate) to practice medicine in Illinois shall be a requisite for residency in an Illinois hospital." Accordingly, Presbyterian-St. Luke's residents are required to have a Certificate of Registration when they begin their service or to qualify for licensure by examination the first time such examination is offered after beginning service. Members of the intern and resident staff may not practice outside the Hospital during the terms of their appointments.

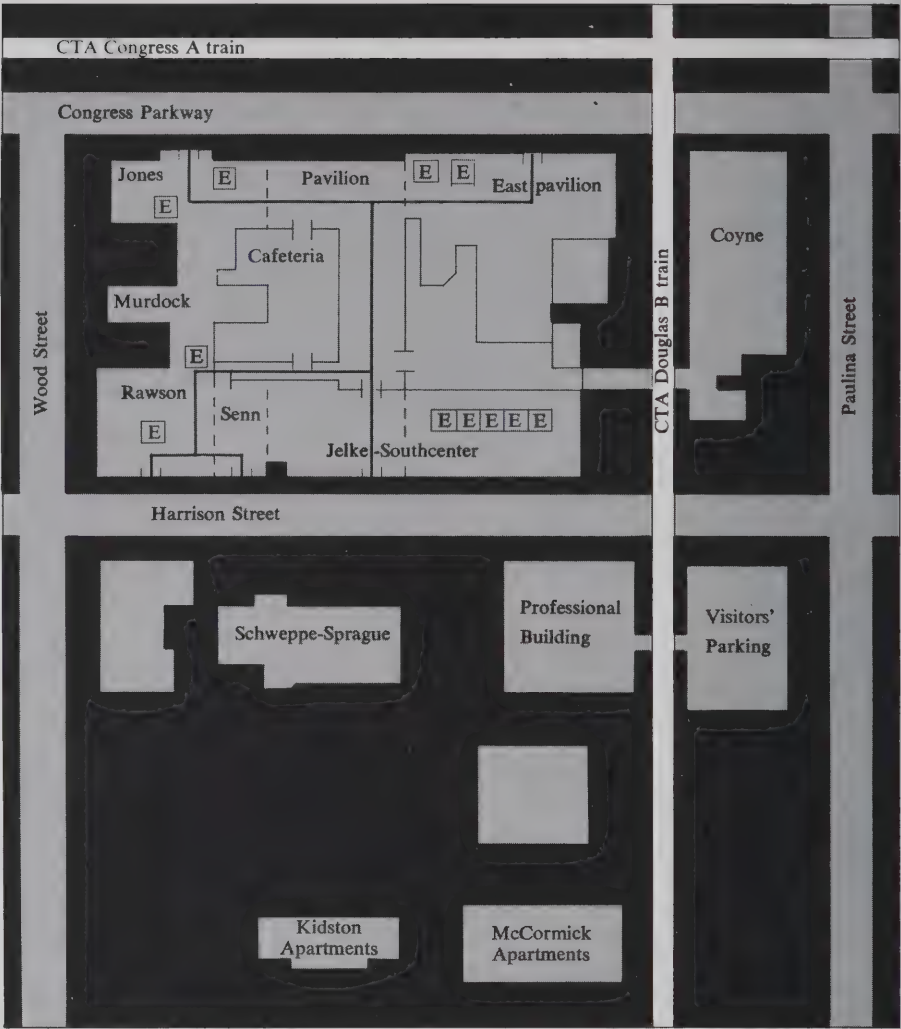
The requirement for licensure in Illinois states: "Any applicant who shall have completed 12 months of clinical training in a hospital, as required by Section 5-1(b) of the Medical Practice Act, and who has been accepted for further training in a specialty or general practice residency program by a hospital or institution approved by the Department for that purpose, shall be deemed to have complied with the requirements of this rule and of the Medical Practice Act in this regard."

Financial Considerations

Interns receive a basic salary of \$9,525 per year. First year residents receive \$10,344 per year; second year residents receive \$10,939 per year; third year residents receive \$11,646 per year; fourth year residents receive \$12,241 per year; fifth year residents receive \$12,836; sixth year residents receive \$13,432; and seventh year residents receive \$14,026. The hospital furnishes uniforms and laundry service. There is a House Staff Loan Fund from which loans may be made by the hospital upon recommendation of the Loan Committee of the Medical Staff.



Map of the Medical Center



Bold lines indicate main first-floor corridors of hospital.
[E] indicates location of elevators.

A.B. Dick Hall: E. Pavilion, bsmt.
 Administration: Jelke-Southcenter, 1
 Admitting office: E. Pavilion, 1
 Albright seminar room:
 Jelke-Southcenter, 10
 Anesthesiology: Jelke-Southcenter, 7
 Barber shop: E. Pavilion, bsmt.
 Beauty shop: E. Pavilion, bsmt.
 Bent seminar room: Jelke-Southcenter, 7
 Biochemistry: Jelke-Southcenter, 4
 Biomedical Engineering:
 Jelke-Southcenter, 9
 Blood bank: Murdock, bsmt.
 Volunteer donor blood bank:
 Prof. Bldg., 5
 Business office: E. Pavilion, 1
 Cafeteria: Pavilion, 1
 Cafeteria conf. room: Pavilion, 1
 Cardio-respiratory: Jelke-Southcenter, 10
 Cashier: E. Pavilion, 1
 Chapel: E. Pavilion, 1
 Chaplaincy: Pavilion, 1
 Clinics:
 Birth defect: Jones, 8
 Dental: Prof. Bldg., 5
 Ear, nose, and throat:
 Jelke-Southcenter, 2
 Gynecology: Rawson, 2
 Medicine: Jelke-Southcenter, 2
 Neurology: Jelke-Southcenter, 2
 Nutrition: Senn, 2
 Obstetrics: Rawson, 2
 Ophthalmology: Rawson, 3
 Pediatrics: Rawson, 2
 Podiatry: Jelke-Southcenter, 2
 Psychiatry, adult & child:
 1720 W. Polk St.
 Psychology: Senn, 2
 Speech and hearing: Senn, 2
 Surgery, adult: Jelke-Southcenter, 2
 Urology: Jelke-Southcenter, 2
 Well baby: Rawson, 2
 Development: Prof. Bldg., 9
 Dermatology: Prof. Bldg., 3
 Dialysis: Rawson, 2
 EEG: Murdock, 2
 Emergency room: Jones, 1
 Employee health center: Prof. Bldg., 2
 Endocrinology: Rawson, 4
 Facilities, planning: Prof. Bldg., 8
 Faculty club: Prof. Bldg., 6
 Finance: Prof. Bldg., 10
 Gastroenterology: Jelke-Southcenter, 10
 Gift shop: E. Pavilion, 1
 Gynecology: Pavilion, 7
 Health Center: Rawson, 1
 Health Center conf. room A:
 Jelke-Southcenter, 2
 Health Center conf. room B:
 Jelke-Southcenter, 2
 Hematology: Jelke-Southcenter, 3
 Hepatology: Senn, 4
 Human Resources: Schweppe-Sprague, 2
 Infectious diseases: Rawson, 3
 Information desk: E. Pavilion, 1
 Inhalation therapy: E. Pavilion, 6
 Intensive care
 Medical Intensive care: E. Pavilion, 11
 Surgical Intensive care: Jelke-
 Southcenter 6
 Lounge, main: E. Pavilion, 1
 Lost and found: Senn, 1

Medical technology school: Jelke-
 Southcenter, 3
 Medicine: Jelke-Southcenter, 10
 Microbiology: Jelke-Southcenter, 8
 Neurology: Murdock, 3
 Nuclear medicine: Jelke-Southcenter, 13
 Nurses' conf. room: Prof. Bldg., 3
 Nursery: Jones 7; E. Pavilion, 7
 Nursing office: Prof. Bldg., 3
 Obstetrics: Pavilion, 7
 Oncology: Prof. Bldg., 8
 Operating rooms: Jelke-Southcenter, 6
 Ophthalmology: Rawson, 3
 Orthopedics: Rawson, 7
 Outpatient accounting: Jones, 1
 Pastoral Education: Schweppe-Sprague, 7
 Pathology: Jelke-Southcenter, 5
 Patient floors:
 E. Pavilion, 2-13
 Jelke-Southcenter, 6
 Jones, 2-5, 7
 Murdock, 5, 7
 Pavilion, 2-5
 Patient Library: Pavilion, 2
 Pediatrics: Jones, 5
 Pharmacies: Pavilion, 1; Prof. Bldg., 1
 Physical therapy: Murdock, 4
 President's office: Prof. Bldg., 9
 Preventive Medicine: Prof. Bldg., 4
 Professional suites: Prof. Bldg.
 Psychiatry: E. Pavilion, 13
 Public relations: Prof. Bldg., 9
 Radiologic tech: E. Pavilion, 1
 Radiology: E. Pavilion, 1
 Radiotherapy: E. Pavilion, 1 and bsmt.
 Renal and nutrition: Rawson, 5
 Rush Medical College
 Admissions office: Prof. Bldg., 9
 Alumni assoc.: Prof. Bldg., 9
 Deans' offices: Prof. Bldg., 9
 Library: Rawson, 1
 Security: Southcenter, 1
 Smith Lounge: E. Pavilion, 1
 Surgery: Jelke, 7
 Tea Room: E. Pavilion, 1
 Volunteer services: Pavilion, 1
 Woman's Board: Schweppe-Sprague, 1
 Woman's Board library: Rawson, 5
 X-ray: E. Pavilion, 1

The Presbyterian was founded with two high purposes, caring for the sick and aiding in medical education. The hospital that confines itself solely to the treatment of the sick is somewhat dwarfed. To be kept alive and progressive it should have the stimulus of the necessity of instructing young, active, wide-awake undergraduates, interns and nurses. This addition to the hospital gives us these facilities; it opens to the staff the opportunity of acquiring more knowledge and it also gives us added facilities for research . . . Unless the spirit of research is in a hospital, unless it pervades the various branches of the medical institution, the educational function of the hospital languishes and the atmosphere becomes stale; things fail to progress and the patients suffer . . . And yet no matter what view we may take the central figure in the hospital is, and should be, the patient . . .

From Dr. James B. Herrick dedication address
of the Murdock Memorial Building, 1912

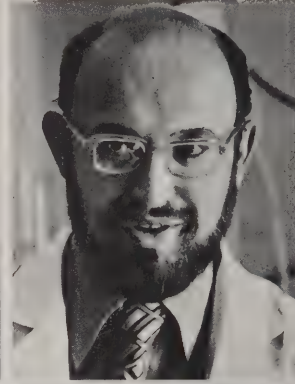
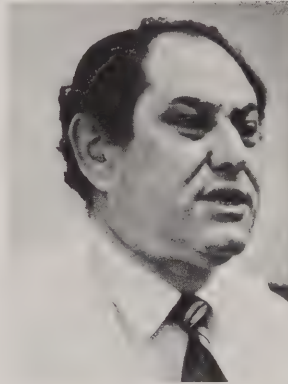
Office of
Biological and Behavioral
Sciences and Services

Department Chairmen

Howard H. Sky-Peck, Ph.D.
Biochemistry

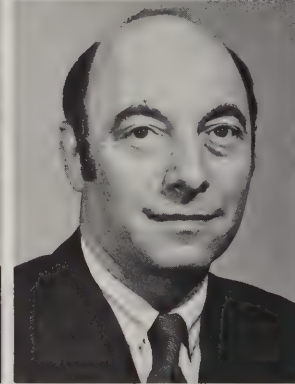
James W. Dow, M.D.
Biomedical Engineering

Henry Gewurz, M.D.
Immunology



Friedrich Deinhardt, M.D.
Microbiology

David I. Cheifetz, Ph.D.
Psychology and Sciences of Society



Department of Biochemistry

Howard H. Sky-Peck, Ph.D., The John W. & Helen H. Watzek Chairman of Biochemistry

Bezkorovainy, Anatoly, B.S. M.S., Ph.D. Associate Professor, RMC	Harrison, William H., B.S., M.S., Ph.D. Associate Professor, RMC (Neurological Sciences)	Kachmar, John F., B.S., M.S., Ph.D. Senior Scientist, PSLH; Assistant Professor, RMC	Mattenheimer, Hermann, M.D. Senior Scientist, PSLH; Professor, RMC
Booyse, Francois, B.S., M.S., Ph.D. Assistant Professor, RMC	Hayashi, James A., B.S., M.S., Ph.D. Senior Scientist, PSLH; Professor, RMC	Kornel, Ludwig, M.D., Ph.D. Senior Scientist, PSLH; Professor, RMC (Internal Medicine)	Rafelson, Max E., Jr., B.S., Ph.D. Senior Scientist, PSLH; Professor and Associate Dean, RMC
Cole, Edmund R., B.S., M.S., Ph.D. Assistant Scientist, PSLH; Assistant Professor, RMC (Internal Medicine)	Hoskin, Francis C. G., B.A., M.A., Ph.D. Visiting Professor, RMC	Kuettner, Klaus E., M.S., Ph.D. Associate Professor, RMC	Sky-Peck, Howard H., B.S., Ph.D. Senior Scientist, PSLH; Professor, RMC

The Department of Biochemistry provides biochemical diagnostic services to the hospital and medical center. The department is engaged in several areas of research which include the physical and chemical properties of human platelets and the mechanism of thrombosis; intermediary metabolism of cariogenic streptococcus and the role of enzymes in dental caries; biochemistry of glyco-proteins; functional and metabolic changes in the kidney following transplant; and biochemical characterization of human cancers.

The departmental personnel include permanent staff members and postdoctoral research associates who participate actively in the undergraduate and postgraduate teaching programs of Rush Medical College. In addition, the departmental staff conducts seminars, specialty rounds, and elective courses in the biochemistry of diseases and in research methodology. These functions are available to the medical students, research fellows, interns, residents and staff of Rush-Presbyterian-St. Luke's Medical Center.

Department of Biomedical Engineering

James W. Dow, M.D., Chairman

Bacus, James, B.S., Ph.D. Assistant Scientist, PSLH; Assistant Professor, RMC (Internal Medicine)	Gottlieb, Gerald, B.S., M.S., Ph.D. Assistant Professor, RMC	Masek, Gerald A., B.S.E., M.S.E., Ph.D. Assistant Scientist, PSLH; Assistant Professor, RMC	Rovick, Allen, B.S., M.S., Ph.D. Associate Professor, RMC
Campbell, John A., Ph.D. Assistant Scientist, PSLH; Assistant Professor, RMC	Hegyvary, Csaba, M.D. Associate Professor, RMC	Michael, Joel A, B.S., M.S.C., Ph.D. Associate Professor, RMC (Neurological Sciences)	Sandberg, Allen A., B.S., M.S., D.S.C. Assistant Scientist, PSLH; Assistant Professor, RMC
Davis, Floyd A., B.S., M.D. Associate Scientist, PSLH; Associate Professor, RMC	Ichinose, Lester Y., B.A., M.A., Ph.D. Visiting Assistant Professor, RMC	Passovoy, Mitchell, B.A., M.A. Senior Scientist, PSLH; Associate (Internal Medicine)	Semmlow, John L., B.S., Ph.D. Assistant Professor, RMC
Dow, James W., B.S., M.D. Senior Scientist, PSLH; Professor, RMC (Internal Medicine)	Levett, Jeffrey, B.S., Ph.D. Assistant Professor, RMC (Ophthalmology)		Weinstein, Herbert, B.E., M.S., Ph.D. Visiting Associate Professor, RMC

Biomedical Engineering is directly concerned with the application of the concepts and methods of the engineering sciences in biology and medicine. During the past year Biomedical Engineering has added faculty strength in pattern recognition, vision and health system dynamics, thereby securing virtual institutional autonomy. Research in these areas and in neurophysiology, particularly with respect to study of multiple sclerosis in collaboration with the Department of Neurology, has proceeded in a gratifying manner. A new collaboration with the Department of Immunology in the study of shock has been added to the ongoing effort in cardiovascular control and regulation of acid base balance conducted jointly with the Department of Surgery.

Significant progress has been made in the develop-

ment of hospital communications enabling experimental deployment of a near-operational laboratory test reporting system now covering hematology with addition of biochemistry in immediate prospect and microbiology for the foreseeable future. ANCHOR offers a new opportunity for application of these and similar systems in a health maintenance environment. A promising beginning has been made in automated history taking and the department is now under consideration for certification by the Health Care Technology Division of NIH as a member of the Caceres electrocardiogram interpretation users program. Automation of clinical catheterization data analysis is nearing completion in the Medical Engineering Section.

Department of Immunology

Henry Gewurz, M.D., Thomas J. Coogan
Chairman of Immunology

Gewurz, Henry, B.S., M.D.
Senior Scientist, PSLH;
Professor, RMC
(Pediatrics)

The Department of Immunology investigates the role of the immune response in host defense and disease; immunologic methods in the diagnosis, treatment and manipulation of diseases; and mechanisms of immune recognition and consequent inflammation. The department provides immunochemical and serologic diagnostic procedures for the hospital and evaluates the immune competence and ongoing immune reactions in patients with a variety of diseases. Current projects include the role of complement and kinins in inducing tissue damage, mechanisms of transplantation rejection reactions, interrelationships between

immune responses and neoplastic diseases, development of the immune response, the role of the acute phase responses in body defense, and immune mechanisms in arthritis, nephritis and hepatitis. Laboratory space and small animal facilities are available in the department. Teaching activities include participation in hospital specialty rounds, undergraduate and postgraduate courses in Immunology and seminar programs. Three month elective periods are available for undergraduate students. Research and clinical fellowships for longer periods are arranged on an individual basis.

Department of Microbiology

Friedrich Deinhardt, M.D., Chairman

Casto, Bruce C., B.S., M.S., S.C.D.
Associate Professor, RMC
Deinhardt, Friedrich, M.D.
Senior Scientist, PSLH;
Professor, RMC
Deinhardt, Jean B., B.S. Ph.D.
Associate RMC
Edwards, Laurence D., M.D.
Assistant Attending, PSLH;
Instructor, RMC
(Internal Medicine)
Falk, Lawrence A., B.A., M.A., Ph.D.
Assistant Professor, RMC

Fisher, Lester E., D.V.M.
Associate Professor, RMC
Gavitt, Frances, B.A., M.S., Ph.D.
Assistant Professor, RMC
Goodheart, Clyde R., B.S., M.S., M.D.
Professor, RMC
Holmes, A. William, B.A., M.D.
Senior Attending, PSLH;
Professor, RMC
(Internal Medicine)
Jensik, Stephen, M.D.
Assistant, RMC

Landau, William, B.A., M.S., Ph.D.
Assistant Scientist, PSLH;
Assistant Professor, RMC
Lang, Gordon R., B.A., M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC
(Internal Medicine)
Marczynska, Barbara, M.S., Ph.D.
Assistant Professor, RMC
Northrop, Robert L., B.S., D.V.M., Ph.D.
Associate Professor, RMC
Ogden, James D., B.S., D.V.M.
Assistant Professor, RMC

Peterson, David, Ph.D.
Assistant, RMC
Schuytema, Eunice H. C., B.S., M.S., Ph.D.
Assistant Professor, RMC
Shramek, Grace, B.S., M.S., Ph. D.
Assistant Scientist, PSLH
Assistant Professor, RMC
Widra, Abe, B.A., M.S., Ph.D.
Consulting Scientist, PSLH;
Visiting Associate Professor, RMC (Dermatology)
Wolfe, Lauren G., M.S., D.V.M., Ph.D.
Associate Professor, RMC

The activities of the Department of Microbiology encompass service, research, and teaching. Facilities are available for bacteriological diagnosis, identification of parasites and fungi, and routine virus isolation. In addition, the various serological studies available include hemagglutination, complement fixation, agar gel diffusion, and more involved studies such as neutralizing antibody titration and fluorescent antibody examination.

Current research projects include studies of slow viruses and rubella, a study of the causative agents of viral hepatitis, studies in viral oncology and basic host-cell virus interrelationships.

Laboratory space and small animal facilities, including a marmoset colony, are available within the department.

Teaching activities of the department include participation in hospital rounds, especially infectious diseases, and participation in the activities of Rush Medical College and the Department of Microbiology of the University of Illinois Graduate College. A three month rotation through the department is available as part of the residencies in internal medicine, surgery, and pathology. Research fellowships for longer periods are arranged on an individual basis.

Department of Psychology and Sciences of Society

David I. Cheifetz, Ph.D., Chairman

Benner, Larry A., B.A., M.A., Ph.D. Instructor, RMC	Elbert, Jean C., B.A., M.A. Instructor, RMC (Psychiatry)	Hartings, Michael F., B.A., M.S., Ph.D. Assistant Scientist, PSLH; Assistant Professor, RMC	McGurrin, Martin C., B.A., M.A., Ph.D. Assistant Professor, RMC
Berkson, Gershon B., B.A., M.S., Ph.D. Visiting Professor, RMC	Exum, Dolores B., B.A., M.S.W. Instructor, RMC (Preventive Medicine)	Leavitt, Frank, B.A., Ph.D. Associate Scientist, PSLH; Assistant Professor, RMC	Mena-Franco, Josefa, M.A. Instructor, RMC (Psychiatry)
Brocken, Cecilia, B.S., M.A., Ph.D. Associate Scientist, PSLH; Assistant Professor, RMC (Pediatrics)	Garron, David C., B.A., M.A., Ph.D. Senior Scientist, PSLH; Associate Professor, RMC	Linder, Ronald S., B.A., Ph.D. Assistant Scientist, PSLH; Assistant Professor, RMC (Internal Medicine)	Shanley, Luke A., B.S., M.S., Ph.D. Assistant Scientist, PSLH; Assistant Professor, RMC (Pediatrics)
Cheifetz, David I., M.A., Ph.D. Senior Scientist, PSLH; Professor, RMC	Guise, Gracia, B.S., M.S. Assistant Scientist, PSLH; Assistant Professor, RMC (Psychiatry)		

Pre-Doctoral Training in Clinical Psychology

The Department of Psychology and Sciences of Society of Rush-Presbyterian-St. Luke's Medical Center offers a full-time internship, approved by the American Psychological Association, for third and fourth year level students. Interns elect one of the five basic experience-training options of the program:

- General Clinical Psychology
- Community Psychology
- Clinical Child Psychology
- Clinical Neuropsychology
- Clinical Research Psychology

Beyond the unique features of each of these specialization internship electives, they share a common emphasis on a broad understanding of the life adaptations of children and adults. Within each of the specialization areas the program provides both didactic work and clinical experience aimed at furthering the development of professional, clinical psychological competence in the diagnosis, treatment, and research of pathological life adaptations, and toward fostering, as well, a professional concern for preventive psychological practices.

The Department of Psychology and Sciences of Society is a charter member of the Association of Chicago Area Training Centers in Clinical Psychology. The department is fully autonomous, both on the faculty of Rush Medical College and on the staff of Presbyterian-St. Luke's Hospital. The department is structured to include not only psychologists but faculty members from other disciplines as well, such as sociologists, anthropologists and others. The uniqueness of this departmental organization provides its members unusual opportunities to play a significant role in health education, clinical activity and training, and research.

The clinical, teaching and research activities of the department range throughout most areas of the hospital. The Psychiatry specialty services include a 61 bed inpatient unit for children and adults, a day hospital offering both child and adult programs, out-patient clinics for children and adults, and community-based mental health services. Children, ado-

lescents, and adults of all ages and all varieties of transient and major psychological disturbances, functional and organic, are seen for diagnostic and treatment service. Similarly, the Departments of Pediatrics, Neurology, Internal Medicine, Preventive Medicine, and Obstetrics and Gynecology, maintain extensive inpatient and outpatient facilities, in all of which psychologists have significant clinical and research interests. All these elements of the hospital are also resources for the training programs of this department. In addition to psychology internship programs, the hospital provides accredited training in most residencies, including psychiatry and child psychiatry, as well as programs in occupational therapy, psychiatric social work, nursing, and the training of community youth workers, community mental health aides, and allied health specialists.

Training Supervision: Supervisory practices in the psychology training program derive from the staff's own experience as trainees and as trainers, and from a serious commitment to training, itself, as a significant professional activity. During the year every trainee receives thoroughly detailed and personal supervision of his clinical activities and of whatever research he is conducting. Supervisory investment is extensive at the beginning of the year and it remains that way throughout the year. It is recognized that the supervisory needs of trainees shift over the course of the year, as trainees develop increased competence through experience and become able to function with independence. The continuing provision of extensive supervisory time during the year is based on the premise that developing competence does not, and should not, exhaust the capacity of trainees to learn new material or to develop new insights about old material in the later part of the training year.

Individual supervision in psychodiagnostics is provided each trainee through rotating assignments, by case, to members of the department staff. Initially, trainee and supervisor work quite closely as a diagnostic team, from the planning of examination tactics through the ultimate provision of consultative service to the referent. Early in the year, the trainee-super-

visor relationship is shifted to afford the trainee all of the independence of clinical action that he is ready to assume.

Supervision in diagnostic interviewing techniques is part of a practicum-seminar conducted throughout the year. Making use of video-tape television and tape recordings, trainees are observed and supervised on an extensive series of one hour interviews with psychiatric patients. Interviewing supervision, provided on a group basis, has the same two-fold emphasis as psychodiagnostic supervision: emphasis on techniques of obtaining data and emphasis on the understanding of the data obtained.

Additional diagnostic training and supervision is offered through the department's diagnostic case conference. Once weekly, in rotation over the entire trainee group, a case workup is presented for the trainee-staff discussion. These case conferences are planned for the emphasis of particular diagnostic and data-analytic problems, and discussion is organized around the salient issues of the case at hand. Both interview and testing diagnostic cases are utilized. Such staff conferences, where the diagnostic thinking of both trainees and their supervisors must be made explicit and defended before their peers, is a rare, but highly profitable training experience.

Individual supervision, and some group supervision, is provided on a continuing basis by members of all disciplines engaged in psychotherapy as a professional practice. Trainees may expect supervision from an experienced therapist of the staff of psychiatry, psychology and psychiatric social work for individual and group psychotherapy. Continuous case seminars provide a context for broader learnings.

Internship Programs: All internship training is conducted on a full-time basis for one calendar year, beginning in September. The program is open to third or fourth year level graduate students from an A.P.A. approved university program in clinical psychology; a prior clerkship experience is desirable.

Within the internship program the clinical student elects one of the basic options for training. The specialization options are those of: General Clinical Psychology; Community Psychology; Clinical Child Psychology; Clinical Neuropsychology; and Clinical Psychological Research. Each of these elective options is designed to further the development of professional competences particularly important to future clinical-research work in the area of the elective. These elective sub-programs, within the context of the total training program, have common as well as unique elements, and they are closely integrated with one another throughout the training year. In particular, the development of basic tool-skills and a clinical psychological point of view, viewed here as a needed foundation for professional functioning in every specialization field, is highly stressed.

Orientation and program development: Over the years, training staff has been increasingly impressed with the degree to which interns would like to pattern

their training year according to their own needs and predilections as they see them. The staff accepts the possibility that such patterning may result in individualized programs which diverge, in given instances, from the predilections of the staff itself. An effort is made, therefore, to encourage individualized program planning by the intern, as long as such planning is feasible in terms of opportunities available. The staff's only insistence is that certain minimal requirements, consistent with sound training, be met by all interns, recognizing that such requirements are subject to change as the tasks of the profession change.

To make for informed planning by interns, the program provides an initial orientation period of four weeks, during which time each intern gains detailed knowledge of the practices, problems, and training opportunities that characterize the major areas of the hospital available to him. During this time, too, he begins a series of basic experiences in interviewing, psychological testing and psychotherapy, sharpening his ability to gather data and to pursue hypotheses about the kinds of data needed to reach sound clinical conclusions. He is observed during testing and interviewing, so that difficulties in working with patients may be rectified and strengths reinforced. Interns, in turn, have ample opportunity to observe staff in the same clinical situations, so that models of good clinical practice are made explicit. Although patients seen by interns are selected to provide a rounded training experience, from the very beginning of the year interns work under clinical demands that are real demands; no patients are seen simply for exercise.

At the outset, each intern is assigned a staff member who serves as his preceptor through the year. At the close of the orientation period, each intern, with his preceptor, plans the program he will follow for the quarter beginning in October. Subsequent quarters are planned in the same way, the preceptor's function being to review the intern's progress with him, to suggest available training possibilities, and to call attention to paths of development the intern might pursue. As early as possible, through orientation and preceptorship, the typical trainee is equipped to pursue the elective or specialized aspects of his training year: as a maturing observer and diagnostician of behavior; as a person whose interactions with others are basically therapeutic; as an individual having considerable familiarity with the points of view of his psychological and other mental health and medical colleagues.

General Clinical Psychology Internship: Training emphasis in this program is placed on the particularly important contribution the clinical psychologist can make in the general hospital, including the psychiatric, setting. In some measure, this is the broadest option within the total internship program and it provides both solid clinical training and diverse clinical experience for the intern who is not already committed to a specialty field.

Both diagnostic and therapeutic training are an

integral part of this elective program. Diagnostic skills are brought to bear on the understanding of the behavioral and emotional disturbances frequently associated with physical illnesses, on the elucidation of character problems, on the study of thought processes and pathologies, and on the study of intellectual deficits associated with neurologic disorders, to give some examples. During the training year, the intern will join his maturing skills with those of psychiatrists, neurologists, pediatricians, general medical practitioners, and other staff, all of whom are engaged in the analysis of and the treatment of the complex problems presented by a patient's disability or illness. Within the psychiatry services and the hospital at large the intern can expect to work with a variety of patients presenting a spectrum of mild to severe psychological problems, covering the range from organic psychopathologies to the more purely functional disorders.

The intern in the general program gains his experiences through self-selected rotating assignments to various clinical areas of the hospital. He will not simply be awash in a conglomerate of unassorted clinical experiences. Such assignments include an acute, intensive inpatient unit, the outpatient clinics, day hospital, and consultation services. The intern may also have an assignment to the community health clinic. As well as providing the trainee with experience in depth, these assignments also introduce the trainee to the professional problems and possibilities inherent in such settings. Important among such possibilities is the learning of what kinds of information and assistance are sought from the psychologist in these settings and the development, by the trainee of flexible clinical and communicative skills to meet the demands of a complex professional life.

Therapy experience and training in the general program is typically with patients in the outpatient setting. Including group experience, it is intensively supervised by therapists of differing backgrounds and theoretical points of view.

Additional training in the general program is provided through the staffs, ward meetings and seminars which are associated with each assignment as well as by those Psychology staff conferences which form the stable part of the internship year.

Clinical Child Psychology Internship: The intern in this program is encouraged to define his professional role as one who deals with the broad spectrum of child behavior instead of being limited to crystallized psychiatric disorders in children. This training elective provides experience with the full range of behavior important to the understanding of child development and adaptation. Emphases of the program are on familiarization with the manifold problems of children, and with appropriate techniques of dealing with them as they occur in the psychiatric, the pediatric and the community settings. As a special emphasis, the intern's experience is guided toward recognition of and management of children's emotional problems

before they become disabling; thus, concentration is on prevention and early amelioration.

In addition to work in the child psychiatry clinic and inpatient service, the trainee spends a large portion of his year as an adjunct and consultant to the hospital's pediatric service. He concerns himself, here, with the child who is a medical patient, developing skills in recognizing nascent emotional disorders and those emotional and familial problems which complicate the management of medical illness. The trainee also sees children whose particular disabilities require psychological as well as medical management, such as children with birth defects and language disorders.

In the child program, the trainee's diagnostic training will be mainly centered in his work with children. He will, however, work with both parents and children in psychotherapy and brief counseling. The trainee may be extensively involved in the hospital's community mental health program, which is centered in an inner-city neighborhood adjacent to the hospital. Here he will have opportunity, building on his earlier experience, to develop consultative skills in contacts with community agents, such as visiting nurses, school nurses and teachers.

Visits to well-baby clinics, local schools and other child-care agencies, along with staffs and seminars which tie into the trainee's clinical experience round out the training year in this program.

Community Psychology Internship: The development of this program is stimulated by the hospital's own involvement in community-based health and mental health services, as well as by the generally increasing professional interest in community-centered mental health action.

The opportunity afforded by our community clinic, in a nearby inner-city, ghetto neighborhood permits the shaping of a community psychology traineeship that is both well-founded on the hospital's established medical and psychological programs and, at the same time, widely open to experimental approaches to the mental health problems of a greatly neglected community.

While the major field of action in this internship differs from that of the other training option, similar goals obtain. Among them are the development of broad diagnostic and therapeutic skills which can be appropriately brought to bear on the problems presented in the community. While some aspects of community health programs call for innovative techniques, both for the psychologist and other mental health professionals, this internship program is built on the premise that clinical work by the psychologist in the community should rest upon foundation skills in clinical psychology. The trainee in this program will have ample opportunity to attempt experimental approaches to the many problems presented in the community, but based upon an educated awareness of the need to amplify and expand upon his clinical psychological skills rather than rejecting them out of

hand. Thus, this program also prepares the psychologist to be able to perform the more traditional psychological service functions when the need devolves upon him in his community work.

The intern in this program will be encouraged to define himself as a person involved at all levels of intervention in the community as a clinical psychologist and behavioral scientist. He will participate in primary prevention and educational work as well as in treatment programs, along with his health and mental health colleagues. The basically family-centered diagnostic and treatment approach of the community health center will bring him into contact with a diverse community population of children, adolescents and adults.

Clinical Neuropsychology Internship: This program is intended for students who have a defined interest in clinical or clinical research careers in neuropsychology. Training in this elective program is centered on the psychological study of the cognitive and affective sequelae of disorders of the central nervous system. The program emphasizes the clinical psychologist's contribution to the diagnosis and management of patients suffering from acute and chronic neurological disorders and organic psychopathologies. Through study via clinical techniques, perceptual, cognitive and affective disabilities are described; the relation of these disabilities to the organic pathology is explored; and the implications of such disabilities for life adaptation are defined.

There is close and continuing collaboration and consultation in this program with members of the neurology, pediatrics, neurosurgery, and psychiatry services. The intern in the clinical neuropsychology program will gain experience with neurological disorders having developmental consequences, such as in the pediatric birth defects setting, as well as with the disorders reflective of acute injury and disease, and of the changes of aging. Ample experience with patients who represent normative baseline neurological functioning is also an important part of this program. Although clinical diagnostic skills receive the major emphasis in this program, counseling and psychotherapy techniques are also taught and practiced throughout the internship year.

In addition to the case presentations and seminars in neuropsychology, neurology, neurosurgery, pediatrics and psychiatry, there are didactic seminars in neuroanatomy, neuropathology, organic psychiatry and other special topics for those interns who may require them or have particular further specialized interests.

Participation in the department's continuing research on copying disabilities, development of perceptual-motor skills, and brain functioning is especially open to the intern in this program.

Clinical Psychological Research Internship: The aim of this elective program is to provide the sound clinical background needed for the intern whose basic interest lies in the research exploration of personality

and psychopathology rather than in fulltime clinical work. The program stresses experience with clinical psychological problems, clinical techniques, and the clinical setting. The internship is not limited to experience with the traditionally defined mental disorders, but includes experiences with psychological aspects of varied illnesses and situations. Provision is made for work with the widely varied populations found in the inpatient, the clinic and the community settings. Although the program is *not* designed to support dissertation research, the personal research interests of the trainee are encouraged. Thus, it is a suitable elective for students who plan combined clinical-research careers.

Following the foundation quarter of the program, which is itself partially devoted to the development of a research plan for the year, the intern receives additional training with the clinical techniques especially suited to his general research interests or the investigation of particular problems. Primary supervision in this program during the year is provided by the research supervisor. The intern may plan to undertake independent research or participate in one of the ongoing research programs of the department. Current research includes: studies of person perception in the psychiatric milieu; studies of perceived parental attitudes as they relate to treatment management of adolescents; studies of cognition and personality in persons with chromosomal anomalies; studies of perception and intelligence in brain-damaged children and adults.

The department has its own research laboratory with three-channel tachistoscope, eye-movement camera, flicker-fusion apparatus, psychomotor apparatus, and electronic calculators. Other resources of the program include consultative assistance from biostatisticians, biomedical engineers, and other medical and scientific staff as well as high-speed computer facilities.

Although the major interest of the trainee in this elective program may be in research areas, the program nonetheless provides a fairly rounded clinical experience. Both diagnostic and therapy training is provided, as nearly as feasible with the population closest to the trainee's research concerns.

Research in the Training Year Typically, the learning interests of interns leave little time for research involvement; interns tend to come to the field training setting with the primary motive of developing competence in diagnostics and psychotherapy. It is difficult for training centers, as well, to plan a year's program which balances the traditional threefold coverage of diagnosis, therapy, and research, and which does justice at the same time to the diverse and intensive set of training experiences which ought to be a part of the clinical training year. Thus, the descriptions of the clinical internship electives have scant discussion of research possibilities.

Research interests of trainees are highly valued in this center however, and provision can be made

for research work for interns not electing the strong research option of the clinical psychological research program. Both encouragement and aid in the formulation of clinical research problems are available within the format of each of the clinical electives. As detailed in the discussion of the clinical psychological research internship, ample population, equipment and consultative resources are also available to be drawn upon.

Training Staffs and Seminars The Medical Center environment is rich in staffs, seminars and conferences. These are numerous enough so that not even all pertinent conferences can be regularly attended by trainees. With his preceptor, the trainee determines which conferences are most likely to be of benefit to him. A number of Department staffs and conferences form a basic core for trainees in all of the elective programs. Included are:

Psychology Case Conference: 1½ hr/wk
Aut. Win. Spr.

Psychology Professional Problems Seminar:
1 hr/wk Aut. Win. Spr.

Psychotherapy Seminar: 1½ hr/wk
Aut. Win. Spr.

Seminar in Organic Psychodiagnosis: 1½ hr/wk
Win.

Accreditation On recommendation of the Evaluation Committee, Education and Training Board, this Clinical Psychology Internship program is approved by the American Psychological Association for Type G training.

Application Information Four to five internship appointments are made each year for a full-time program beginning in September. The training stipend is \$4,600, plus dependency allowances, or the appropriate U.S.P.H.S. stipend, whichever applies at the time of the appointment. One internship position, each year is available for an exceptional student from a non-APA approved graduate program, but who meets the other qualifications.

Early application for internship positions is encouraged. Applications are considered independently and appointment awards are announced by March 15.



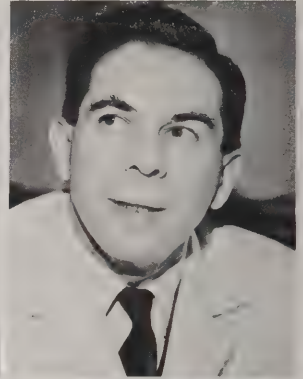
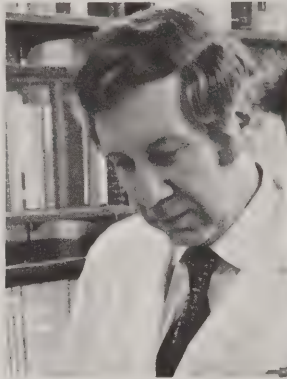
Office of
Medical Sciences
and Services

Department Chairmen

Frederick D. Malkinson, D.M.D., M.D.
Dermatology

Richard E. Buenger, M.D.
Diagnostic Radiology

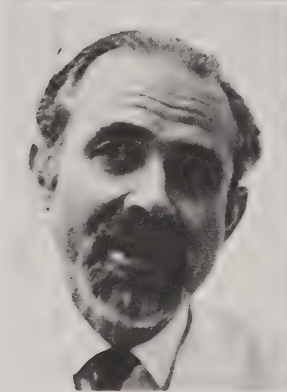
Theodore B. Schwartz, M.D.
Internal Medicine



Maynard M. Cohen, M.D., Ph.D.
Neurological Sciences

Ernest W. Fordham, M.D.
Nuclear Medicine

Joseph R. Christian, M.D.
Pediatrics



Joyce C. Lashof, M.D.
Preventive Medicine

Jan A. Fawcett, M.D.
Psychiatry



Department of Dermatology

Frederick D. Malkinson, D.M.D., M.D., Chairman

Bielinski, Stefan, B.S., M.D.
Associate Attending, PSLH;
Assistant Professor, RMC
Finnerud, Clark W., M.D.
Emeritus, PSLH;
Emeritus Professor, RMC
Haeberlin, John B., Jr., M.D.
Emeritus, PSLH;
Emeritus Professor, RMC
Hetreed, Francis W., M.D.
Emeritus, PSLH;
Emeritus Professor, RMC
Kaplan, Sidney, M.D., M.S.
Assistant Attending, PSLH;
Assistant Professor, RMC

Malkinson, Frederick D., D.M.D., M.D.
Senior Attending, PSLH;
Professor, RMC
McNeese, James, B.S., M.S., M.D.
Adjunct Attending, PSLH;
Instructor, RMC
O'Donoghue, Marianne N., A.B., M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC

Pearson, Roger W., M.D.
Senior Attending, PSLH;
Associate Professor, RMC
Rostenberg, Adolph, Jr., M.D.
Consulting, PSLH;
Visiting Professor, RMC
Smith, Edwin M., M.D.
Emeritus, PSLH;
Emeritus Professor, RMC

Spinka, Harold M., B.S., M.D.
Associate Attending, PSLH;
Assistant Professor, RMC
Szymanski, Frederick J., M.D.
Senior Attending, PSLH;
Professor, RMC
Widra, Abe, B.A., M.S., Ph.D.
Consulting, PSLH;
Visiting Associate Professor RMC (Microbiology)

The Department of Dermatology is devoted to patient care, medical student and resident teaching, and clinical and laboratory research. Out-patient clinics and an in-patient service, as well as consultations for patients, are provided. The Department conducts regular formal and informal teaching sessions for house staff and students. Clinical instruction for students is provided in the medical school curriculum and in the out-patient clinics. In addition, the Department accepts one or two medical students for an elective quarter. Medical residents who may elect to rotate through the Dermatology Department for a period of one to two months will see consultations and out-patients, and will assume responsibilities for the in-

patient service, all under the supervision and instruction of full-time staff members.

The Department of Dermatology is also approved for the full three year training program for residents in Dermatology and accepts one resident each year.

Two main areas of laboratory research are currently under active investigation: (1) the effects of ionizing radiation and drugs on the hair matrix and, (2) ultrastructural analysis of the reaction of skin to injury. Active areas of clinical research include the effects of ionizing radiation combined with drugs on tumors, and ultrastructural pathology in blistering diseases.

Department of Diagnostic Radiology

Richard E. Buenger, M.D., Chairman

Adler, Yolanda T., M.D.
Associate Attending, PSLH;
Assistant Professor, RMC

Alcorn, Franklin, B.A., M.D.
Senior Attending, PSLH;
Associate Professor, RMC

Al-Habbal, Adnan, B.S., M.D.
Adjunct Attending, PSLH;
Assistant Professor, RMC

Bogdonoff, Maurice L., B.S., M.D.
Senior Attending, PSLH;
Professor, RMC (Internal Medicine)

Buenger, Richard E., B.S., B.M., M.D.
Senior Attending, PSLH;
Professor, RMC

Chilcote, Wayne S., Jr., B.A., M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC

Chung-Bin, Anthony, B.S., M.S.C.

Senior Attending, PSLH;
Associate Professor, RMC (Therapeutic Radiology)

Clark, John W., M.D.
Senior Attending, PSLH;
Professor, RMC

Fields, William A., M.D.
Adjunct Attending, PSLH;
Instructor, RMC

Fordham, Ernest W., B.S., M.D.
Senior Attending, PSLH;
Assistant Professor, RMC (Nuclear Medicine)

Gardner, H. Rex, B.A., M.D.
Associate Attending, PSLH;
Assistant Professor, RMC

Grainer, Lornes, M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC

Hill, B. Jay, M.D.
Consulting, PSLH;
Visiting Professor, RMC

Huckman, Michael S., B.A., M.D.

Associate Attending, PSLH;
Associate Professor, RMC (Neurological Sciences)

Jenkinson, Edward L., M.D.
Emeritus, PSLH;
Emeritus Professor, RMC

Justus, Daniel P., B.A., M.D.
Adjunct Attending, PSLH;
Assistant, RMC

Kurti, David J., B.A., M.D.
Adjunct Attending, PSLH;
Assistant, RMC

Marx, William S., B.S., M.D.
Adjunct Attending, PSLH;
Instructor, RMC

Matthew, Guy R., B.A., M.D.

Senior Attending, PSLH;
Associate Professor, RMC (Internal Medicine)

Patel, Suresh K., M.B.B.S.
Associate Attending, PSLH;
Assistant Professor, RMC

Petasnick, Jerry P., B.A., M.S., M.D.

Associate Attending, PSLH;
Associate Professor, RMC

Pirok, Ronald, B.D.S., D.D.S.

Adjunct Attending, PSLH;
Instructor, RMC (Otolaryngology and Brochoesophagology)

Squire, Fay H., M.D.
Emeritus, PSLH;
Emeritus Professor, RMC

Wedgbury, Donald E., B.S., M.D.

Adjunct Attending, PSLH;
Instructor, RMC

Ying, David P., B.S., M.D.
Associate Attending, PSLH;
Assistant Professor, RMC

Young, Howard S., B.A., M.D.
Adjunct Attending, PSLH;
Instructor, RMC

The Department of Diagnostic Radiology provides consultation for well over 100,000 patient examina-

tions each year. The department, which encompasses a space of 27,500 square feet, is located on the main

floor of the hospital, and is divided, operationally and professionally, into six sections. There is a full-time staff of fifteen diagnostic radiologists, with a full-time director of each section. The other radiologists are assigned to individual sections, or rotate through several sections. In addition to the diagnostic radiologists, there is a full-time radiologist director of the Nuclear Medicine Department, a radiochemist, three radiation physicists, and a dental radiologist. All of the routine radiographic work is displayed daily on specially loaded viewing devices within each subspecialty section for interpretation, consultation, and teaching. Special display areas are also located in the Emergency Room, Surgical Intensive Care Unit, and in the portable examination operational center. Each day the responsible sections consult on material in these outposts, as often as is necessary.

Sections The responsibilities for various types of radiologic examinations are divided between the subspecialty sections in the following manner:

Section of General Radiology

Jerry P. Petasnick, M.D., Director

All examinations not specified under other sections, all emergency examinations, and the following special examinations:

Arthrography, sialography, mammography, lymphangiography, peripheral arteriography, and abdominal arteriography (other than GU)

Section of Thoracic Radiology

Maurice L. Bogdonoff, M.D., Director

Routine chest radiography and fluoroscopy, bronchography, tomography, lung biopsy, angiocardiology, coronary arteriography, thoracic aortography

Section of Gastrointestinal Radiology

Yolanda T. Adler, M.D., Director

Barium studies of the gastrointestinal tract
Gallbladder and biliary ducts—including T-Tube and operative cholangiography
Salpingography and pneumogynecography

Section of Urologic Radiology

Suresh K. Patel, M.B.B.S., Director

Excretory urography, retrograde pyelography,
Arteriography and venography of the kidneys and adrenals
Renal cyst puncture and voiding cystography
(other than pediatric patients)

Section of Pediatric Radiology

H. Rex Gardner, M.D., Director

All routine and special radiographic procedures on children, with the exception of neuroradiologic and arteriographic studies

Section of Neuroradiology

Michael S. Huckman, M.D., Director

Plain skull radiography, myelography
All head and neck arteriography and venography
Ventriculography and pneumoencephalography

Facilities Modern equipment made by major American and foreign manufacturers is provided for all of the standard radiographic examinations in fifteen of the main departmental examining rooms. Some of these provide for general examinations, and some of them are equipped for special procedures, such as magnification radiography or for examinations of particular areas of the body, such as the head or chest. A special room is equipped for mammography. Fluoroscopy of the gastrointestinal tract is performed in a suite of rooms. The examinations are remotely controlled, amplified, and televised with cine radiography.

A recently constructed addition to the department houses the most sophisticated and up-to-date facilities for performing any of the most complicated special radiographic procedures. Two large contiguous rooms contain biplane serial filming of the highest technical capabilities for angiography. A remotely controlled specially mounted universally rotating table is equipped with a universally rotating fluoroscopic device. Cine radiography and tomography are immediately available for procedures on this machine requiring manipulation of patients and the flow of contrast materials, such as: bronchography, myelography, cholangiography, percutaneous biopsy, etc.

The neuroradiological unit contains a somersaulting chair with tomographic and arteriographic capabilities for pneumoencephalography. A precision, multi-modular tomographic room is reserved for tomography of the temporal bone and other special areas of the body requiring more accuracy than the other departmental traditional laminographic equipment affords.

Additional equipment is located on the same floor as the operating rooms. In this area, fluoroscopic equipment is available for bronchography. One of the urographic rooms contains the most modern fluoroscopic filming and 70mm serial filming for retrograde pyelography, which is always performed under the direction of a radiologist. This area, adjacent to the cast room, will be developed to provide orthopedic radiologic services and consultation. The portable radiographic equipment for use throughout the hospital is dispatched from this area. The films are processed and displayed in this area for rapid interpretation and ease of accessibility.

Coronary arteriography is routinely performed on special biplane 35mm cine radiographic equipment that is located in the cardiorespiratory laboratory. These examinations are all performed jointly by the Section of Cardiorespiratory Diseases and the Section of Thoracic Radiology.

Nuclear Medicine is located in a new 7,500 square foot facility, including a modern radiopharmacy and gas laboratory under the direction of a radiochemist. Equipment includes high speed single and dual probe scanners, scintillation cameras with rapid sequencing capability for dynamic studies, automatic liquid scintillation and gamma counters and other tracer and monitoring equipment. The Nuclear Medicine Department operates under a broad medical license issued to the institution by the Atomic Energy Commission for use of all isotopes from Atomic No. 1 through 83.

There are over 5,000 radionuclide examinations or treatments a year, with approximately 4,000 of these being scanning procedures. Routine scanning of organs, most with short half lived isotopes, include thyroid, brain, lung, liver, bone, pancreas, parathyroid, placenta, and heart blood pool.

Training programs This department has been approved by the American Medical Association for residency training in straight diagnostic radiology. We currently have eighteen residents in training, accepting six residents annually through the National Radiology Resident Matching Program. The resident staff is responsible for the interpretation of every radiograph, and the performance of every special procedure in the department. Every film interpretation, however, is individually checked by an attending staff member of the appropriate section, and every special procedure is supervised throughout its duration by a specialty radiologist. Various degrees of responsibility are delegated during the training program.

During the first year, the first month is spent in indoctrination with a week-long assignment to each of the four major subspecialties: General Radiology, Gastrointestinal Radiology, Thoracic Radiology, and Urologic Radiology. There are tri-weekly physics courses for radiation safety and protection and daily indoctrination in emergency film interpretation. In order to prepare the resident for night call rotation, which begins in the second month of training, the first year residents take second call with senior residents during the indoctrination period. For the remainder of the year, first year residents rotate monthly through these four subspecialty areas.

During the second year, the residents rotate through each of the four major subspecialties for periods of six weeks, and also spend six weeks each in Pediatric Radiology and Neuroradiology. During this year three months is spent in the Department of Nuclear Medicine to fulfill the requirements of the American Board of Radiology. Weekly laboratory courses in physics are given for most of the year, in addition to the 34 lecture hours of a regularly scheduled didactic radiation physics course.

During the third year of training, two or more months are spent in each of the subspecialties. On special request, time may be allotted for work in the

Diagnostic Radiology Research Laboratory. Physics laboratory sessions are continued, and a special year-end refresher course in physics is given in preparation for the written examination by the American Board of Radiology.

Medical and surgical interns may elect one or more months in the department after consultation with and approval by the department chairman. They are usually assigned rotations through sections of their major specialty interest.

Clinical clerkships of twelve weeks duration are offered to third and fourth year students in Rush Medical College and other Chicago medical schools. These students are assigned to the departmental sections, providing a great stimulus for on-the-job teaching for residents as well as attending staff.

This department sponsors a School of Radiologic Technology, which has about thirty students continually in attendance for a two year didactic and clinical training program, qualifying them for examination by the American Registry of Radiologic Technologists. The diagnostic radiology residents play an active part in teaching the basic anatomy, physiology, and pathology courses in this training program.

Within the department, and other departments in the institution, courses are offered each year in physics, basic radioactive isotope techniques, biostatistics and related mathematics, and the programming and medical usage of computers.

Conferences There are daily conferences within each section for critical review of the day's work with the attending staff, residents, interns, and medical students. At these sessions material is selected for presentation at the section's weekly conference. Topics pertinent to this material are assigned to residents for study or review prior to the presentation.

Daily noon conferences are held in a special departmental conference room equipped with film and slide display devices. Each section presents a conference once a week. Staff and house staff from other departments frequently attend these conferences, in which pathological material of interesting cases is coordinated.

Each week Radiology Grand Rounds are held in the hospital's main auditorium. The radiology residents are assigned several of these hours each year for the formal presentation, with written manuscript and slide material, of any radiological topic of their choice. Preliminary advisory sessions on the selection of topics and methods of presenting the material are held with the department chairman and the subspecialty faculty members.

The department provides radiologic consultation at various hospital-wide conferences: Medical Grand Rounds, Surgical Grand Rounds, Pediatric Grand Rounds, Neurology Grand Rounds, Tumor Conference, and Lymphoma Conference. The material for these conferences is assigned for pre-review and presentation by one of the residents in the appropriate

section. He is supported at these conferences by an attending staff member.

Adjacent to our departmental library is a small photography room containing equipment for preparation of Polaroid prints and permanent slides for display of radiographic material at any of the hospital or departmental conferences.

All of the diagnostic radiology residents are urged to attend the scientific meetings of the Chicago Roentgen Society, which are held six times a year. These include seminars in angiography, neuroradiology, pediatric radiology, nuclear medicine, and therapeutic radiology.

Time is made available for all of the residents to attend refresher courses at the annual convention of the Radiological Society of North America, which is held in Chicago every fall. Although travel expenses are not paid, those residents wishing to attend approved out of town seminars, conferences, and conventions may arrange for the time to do so.

Teaching File Each section maintains its own collection of material for training of radiology residents, medical students, and student technologists. This is in the form of the original films (which correlate pathologic and autopsy reports) or as slide material

for study.

All coding of interesting teaching or pathological material is done on a sectional basis, and stored by computer for easy accessibility.

Library Facilities A radiological library is maintained within the department proper. A complete collection of radiologic and para-radiologic textbooks, bound journals, and current radiologic journals is available in this library. There are facilities for study in the department, and this material does not leave the library. The library is also a reservoir for textual and slide material from previous Radiology Grand Rounds presentations.

Research A recently constructed special diagnostic radiology laboratory for animal experimentation, with specially designed facilities for magnification and ultra-rapid cineradiography is located in the department. It is available to diagnostic radiology residents who have approval to elect such a project in their third year of training.

Residents are encouraged to prepare papers for publication on clinical subjects or research projects. The Chicago Roentgen Society provides time for such presentations at their regular meetings.

Department of Internal Medicine

Theodore B. Schwartz, M.D., Chairman

Akre, Osmund H., B.A., M.D.
Senior Attending, PSLH;
Assistant Professor, RMC
Altman, Martin P., B.A., M.D.
Adjunct Attending, PSLH;
Instructor, RMC
Bachmann, Fedor, B.A., M.D.
Senior Attending, PSLH;
Associate Professor, RMC
Backer, Barbara M., A.B., M.D.
Adjunct Attending, PSLH;
Instructor, RMC
Bacus, James, B.S., Ph.D.
Assistant Attending, PSLH;
Assistant Professor, RMC
(Biomedical Engineering)
Baldwin, David, A.B., M.D.
Senior Attending, PSLH;
Associate Professor, RMC
Ball, Fred E., M.D.
Emeritus, PSLH;
Emeritus Professor, RMC
Barton, Evan M., B.A., M.D.
Senior Attending, PSLH;
Professor, RMC
Batson, Herbert C., Ph.D.
Emeritus, PSLH;
Emeritus Professor, RMC

Becker, Frank O., B.M., M.D.
Associate Attending, PSLH;
Assistant Professor, RMC
Blaauw, Bernard B., B.S., M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC
Black, Arnold, B.S., M.D.
Senior Attending, PSLH;
Professor, RMC
Bogdonoff, Maurice L., B.S., M.D.
Senior Attending, PSLH;
Professor, RMC
(Diagnostic Radiology)
Bonbrest, Helen C., A.B., M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC
(Preventive Medicine)
Breuhau, Herbert C., B.S., M.D.
Senior Attending, PSLH;
Associate Professor, RMC
Briney, Robert R., M.D.
Consulting, PSLH;
Visiting Assistant Professor, RMC
Brown, R. Gordon, A.B., M.D.
Senior Attending, PSLH;
Associate Professor, RMC

Brown, William C., B.S., M.D.
Senior Attending, PSLH;
Assistant Professor, RMC
Campbell, James A., B.A., M.D.
Senior Attending, PSLH;
Professor, RMC; President,
Rush-Presbyterian-St.
Luke's Medical Center
Capps, Richard B., B.A., M.D.
Senior Attending, PSLH;
Professor, RMC
Carleton, Richard A., B.A., M.D.
Senior Attending, PSLH;
Professor, RMC
Carson, Paul E., M.D.
Senior Attending, PSLH;
Professor, RMC
Carton, Robert W., B.A., M.D.
Senior Attending, PSLH;
Professor and Associate
Dean, RMC
Clark, James G., B.S., M.D.
Associate Attending, PSLH;
Assistant Professor, RMC
Colandrea, Michael A., M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC

Cole, Edmund R., B.S., M.S., Ph.D.
Assistant Attending, PSLH;
Assistant Professor, RMC
(Biochemistry)
Coogan, Thomas J., Jr., B.S., M.D.
Associate Attending, PSLH;
Assistant Professor, RMC
Coogan, Thomas J., Sr., M.D.
Consulting, PSLH;
Emeritus Professor, RMC
Dederick, Margarida M., B.S., M.D.
Adjunct Attending, PSLH;
Instructor, RMC
(Psychiatry)
DeJong, George, B.A., M.D.
Adjunct Attending, PSLH;
Visiting Instructor, RMC
Devetski, Robert L., M.D.
Assistant Attending, PSLH;
Visiting Assistant Professor, RMC
DeYoung, Henry D., B.S., M.D.
Senior Attending, PSLH;
Associate Professor, RMC
Dow, James W., B.S., M.D.
Senior Attending, PSLH;
Professor, RMC
(Biomedical Engineering)

Dowling, Harry F., M.D.
Emeritus, PSLH;
Emeritus Professor, RMC

Economou, Peter G., B.S., M.S., M.D.
Associate Attending, PSLH;
Assistant Professor, RMC

Edwards, Lawrence D., M.D.
Assistant Attending, PSLH;
Instructor, RMC
(Microbiology)

Farago, Peter J., M.D.
Senior Attending, PSLH;
Assistant Professor, RMC

Felix, Robert E., M.D.
Senior Attending, PSLH;
Assistant Professor, RMC

Flanagan, George C., M.D.
Senior Attending, PSLH;
Associate Professor and
Assistant Dean, RMC

Fried, Walter, M.D.
Consulting, PSLH; Visiting
Associate Professor, RMC

Frischer, Henri, M.D., Ph.D.
Associate Attending, PSLH
Associate Professor, RMC

Galt, Raymond M., A.B., M.D.
Associate Attending, PSLH;
Assistant Professor, RMC

Garland, John T., B.A., M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC

Garr, William R., B.A., M.D.
Assistant Attending, PSLH;
Associate, RMC

Gdalan, Louis, B.S., R.Ph.
Senior Attending, PSLH;
Associate, RMC

Glickman, Paul B., Ph.B., M.D.
Senior Attending, PSLH;
Associate Professor, RMC

Golden, Harvey E., B.A., M.D.
Associate Attending, PSLH;
Assistant Professor, RMC

Graettinger, John S., M.D.
Senior Attending, PSLH;
Professor and Associate
Dean, RMC

Gregory, Stephanie A., B.S., M.D.
Assistant Attending, PSLH;
Instructor, RMC

Gubisch, Nancy J., B.A. M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC

Hardison, William G. M., A.B., M.D.
Senior Attending, PSLH;
Associate Professor, RMC

Harris, Alan A., M.D.
Adjunct Attending, PSLH;
Instructor, RMC

Hedblom, Carl A., A.B., M.D.
Senior Attending, PSLH;
Associate Professor, RMC

Heffer, Gilbert, A.B., M.D.
Adjunct Attending, PSLH;
Assistant Professor, RMC
(Psychiatry)

Heller, Paul, M.D.
Consulting, PSLH;
Visiting Professor, RMC

Heller, Stanley J., A.B., M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC

Hertko, Leonard J., M.D.
Associate Attending, PSLH;
Assistant Professor, RMC

Hibbs, William G., M.D.
Emeritus, PSLH;
Emeritus Professor, RMC

Highstone, William H., B.S., M.D.
Associate Attending, PSLH;
Associate, RMC

Hoeltgen, Thomas M., B.A., M.D.
Adjunct Attending, PSLH;
Instructor, RMC

Hoepfner, Walter F., M.D.
Emeritus, PSLH;
Emeritus Professor, RMC

Holmes, A. William, B.A., M.D.
Senior Attending, PSLH;
Professor, RMC
(Microbiology)

Horwitt, Max K., Ph.D.
Consulting, PSLH;
Visiting Professor, RMC

Hughes, Richard L., B.A., M.D.
Associate Attending, PSLH;
Assistant Professor, RMC

Ing, Todd S., B.S., M.D.
Associate Attending, PSLH;
Assistant Professor, RMC

Jamieson, Rodney A., B.S., M.D.
Assistant Attending, PSLH;
Associate, RMC

Johnson, Robert E., M.D., Ph.D.
Consulting, PSLH;
Visiting Professor, RMC

Jones, Frank W., A.B., M.D.
Consulting, PSLH;
Assistant Professor, RMC

Jones, John C., B.S., M.D.
Assistant Attending, PSLH;
Instructor, RMC

Jones, Phillip N., M.D.
Senior Attending, PSLH;
Associate Professor, RMC

Kark, Robert M., B.A., F.R.C.P.
Senior Attending, PSLH;
Professor, RMC

Kassriel, Robert S., A.B., M.D.
Assistant Attending, PSLH;
Instructor, RMC
(Preventive Medicine)

Kelly, Frank B., Jr., B.S., M.D.
Senior Attending, PSLH;
Associate Professor, RMC

Kelly, Frank B., Sr., M.D.
Consulting, PSLH;
Emeritus Professor, RMC

Kesler, R. Lincoln, A.B., M.D.
Senior Attending, PSLH;
Associate Professor, RMC

Kinney, Janet, B.S., M.D.
Associate Attending, PSLH;
Associate Professor, RMC

Kirby, William J., M.D.
Emeritus, PSLH;
Emeritus Professor, RMC

Kirkland, Wallace W., A.B., M.D.
Senior Attending, PSLH;
Associate Professor, RMC

Klinger, Alfred D., B.S., M.D.
Adjunct Attending, PSLH;
Associate, RMC (Preventive
Medicine)

Knospe, William H., B.A., M.S., M.D.
Senior Attending, PSLH;
Associate Professor, RMC

Knott, Albert P., Jr., A.B., M.D.
Adjunct Attending, PSLH;
Instructor, RMC

Kofman, Sydney, M.D.
Associate Attending, PSLH;
Visiting Assistant Professor,
RMC

Kornel, Ludwig, M.D., Ph.D.
Senior Attending, PSLH;
Professor RMC
(Biochemistry)

Laing, Grant H., M.D.
Consulting, PSLH;
Emeritus Professor, RMC

Lang, Gordon R., B.A., M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC
(Microbiology)

Lashof, Joyce C., A.B., M.D.
Senior Attending, PSLH;
Professor, RMC
(Preventive Medicine)

Lepper, Mark H., B.A., M.D.
Senior Attending, PSLH;
Professor and Dean, RMC
(Preventive Medicine)

Levin, Stuart, B.M., M.D.
Senior Attending, PSLH;
Associate Professor, RMC

Levine, Charlotte C., B.A., M.D.
Adjunct Attending, PSLH;
Instructor, RMC (Preventive
Medicine)

Levine, Milton D., B.A., S.C.D., M.D.
Senior Attending, PSLH;
Associate Professor, RMC
(Preventive Medicine)

Lindner, Ronald S., B.A., Ph.D.
Assistant Attending, PSLH;
Assistant Professor, RMC
(Psychology and Sciences
of Society)

Lundy, Clayton J., M.D.
Emeritus, PSLH;
Emeritus Professor, RMC

Matthew, Guy R., B.A., M.D.
Senior Attending, PSLH;
Assistant Professor, RMC
(Diagnostic Radiology)

McCreary, Patricia A., A.B., M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC

McFate, Patricia, Ph.D.
Consulting, PSLH; Visiting
Associate Professor, RMC

Medenis, Rute, M.D.
Associate Attending, PSLH;
Associate Professor, RMC
(Pediatrics)

Medenis, Vidvuds, M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC

Meredith, Paul A., A.B., M.D.
Assistant Attending, PSLH;
Associate Professor, RMC

Meyer, John H., M.D.
Adjunct Attending, PSLH;
Associate, RMC
(Preventive Medicine)

Moore, Oscar J., Jr., B.S., M.D.
Associate Attending, PSLH;
Assistant Professor, RMC

Morris, Arthur J., B.A., M.D.
Adjunct Attending, PSLH;
Instructor, RMC

Muehrke, Robert C., B.S., M.D.
Consulting, PSLH; Visiting
Associate Professor, RMC

Muenster, Joseph J., M.D.
Senior Attending, PSLH;
Associate Professor, RMC
(Pediatrics)

Nelson, Bertram, B.S., M.D.
Senior Attending, PSLH;
Professor, RMC

Noble, Barbara W., B.S., M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC
(Preventive Medicine)

Northrop, Greta, B.S., M.S., Ph.D., M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC
(Obstetrics and Gynecology)

O'Brien, Donald E., A.B., M.D.
Associate Attending, PSLH;
Associate, RMC

Oyama, Joseph H., B.S., M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC

Parsons, Robert, B.A., M.D.
Adjunct Attending, PSLH;
Visiting Assistant Professor, RMC

Passovoy, Mitchell, B.A., M.A.
Senior Attending, PSLH;
Associate, RMC
(Biomedical Engineering)

Paul, Oglesby, M.D.
Consulting, PSLH;
Visiting Professor, RMC

Perlia, Charles P., M.D.
Senior Attending, PSLH;
Associate Professor, RMC

Phelan, William H., B.S., M.D.
Senior Attending, PSLH;
Associate Professor, RMC

Pomerantz, Rhoda S., A.B., M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC
(Preventive Medicine)

Post, John, M.D.
Consulting, PSLH; Visiting
Assistant Professor, RMC
(Preventive Medicine)

Ramsey, Michael M., M.D.
Adjunct Attending, PSLH;
Instructor, RMC

Reid, Robert H., A.B., M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC

Rennie, I. Drummond, M.R.C.P.
Associate Attending, PSLH;
Assistant Professor, RMC

Rieckmann, Karl H. W., M.D., D.P.H.
Associate Attending, PSLH;
Associate Professor, RMC

Riff, Donald, M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC

Rinder, Carl O., M.D.
Emeritus, PSLH;
Emeritus Professor, RMC

Roberg, Norman B., M.D.
Emeritus, PSLH;
Emeritus Professor, RMC

Root, Thomas E., B.S., M.D.
Adjunct Attending, PSLH;
Instructor, RMC

Rosenberg, Marvin S., B.S., M.D.
Senior Attending, PSLH;
Associate Professor, RMC

Rosenblate, Howard, B.A., M.D.
Assistant Attending, PSLH;
Associate Professor, RMC

Roskelley, Rigby C., B.A., M.D.
Senior Attending, PSLH;
Professor, RMC

Ryan, Will G., M.D.
Senior Attending, PSLH;
Associate Professor, RMC

Sasseti, Richard J., M.D.
Associate Attending, PSLH;
Assistant Professor, RMC

Scheiner, David L., B.A., M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC
(Preventive Medicine)

Schick, Armin F., M.D.
Consulting, PSLH; Visiting
Assistant Professor, RMC

Schoenberger, James A., B.S., M.D.
Senior Attending, PSLH;
Professor, RMC
(Preventive Medicine)

Scholly, G. Stephen, B.S., M.D.
Associate Attending, PSLH;
Assistant Professor, RMC

Schuessler, Roger G., M.D.
Associate Attending, PSLH;
Assistant Professor, RMC

Schwartz, Theodore B., B.S., M.D.
Senior Attending, PSLH;
Professor, RMC

Scupham, William K., A.B., M.D.
Senior Attending, PSLH;
Assistant Professor, RMC

Shallat, Charles H., B.S., M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC

Silins, Vitolds R., M.D.
Associate Attending, PSLH;
Assistant Professor, RMC

Sklaver, Neal L., B.A., M.D.
Adjunct Attending, PSLH;
Instructor, RMC

Slayton, Robert E., B.S., M.D.
Senior Attending, PSLH;
Associate Professor, RMC

Smith, Roger D., M.D.
Consulting, PSLH; Visiting
Associate Professor, RMC

Snapp, Marshall, B.A., M.D.
Assistant Attending, PSLH;
Associate, RMC

Stamler, Jeremiah, M.D.
Consulting, PSLH;
Visiting Professor, RMC

Steinberg, Harold H., M.D.
Senior Attending, PSLH;
Associate Professor, RMC
(Preventive Medicine)

Straus, Elizabeth K., M.D.
Consulting, PSLH;
Emeritus Professor, RMC

Stuppy, George W., M.D.
Consulting, PSLH;
Emeritus Professor, RMC

Suhs, Richard H., M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC

Susmano, Armando, M.D.
Associate Attending, PSLH;
Assistant Professor, RMC

Tarant, Donald W., B.A., M.D.
Senior Attending, PSLH;
Assistant Professor, RMC

Tarzynski, Marian, M.D.
Associate Attending, PSLH;
Assistant Professor, RMC

Tausk, Kasriel, M.D.
Senior Attending, PSLH;
Associate, RMC

Taylor, Samuel G., A.B., M.D.
Senior Attending, PSLH;
Professor, RMC

Thomson, Andrew, B.S., M.D.
Senior Attending, PSLH;
Associate Professor, RMC

Traut, Eugene F., M.D.
Consulting, PSLH;
Emeritus Professor, RMC

Trobaugh, Frank E. Jr., B.A., M.D.
Senior Attending, PSLH;
Professor, RMC

Tucker, W. Randolph, A.B., M.D.
Associate Attending, PSLH;
Associate Professor, RMC

Twiss, Alston C., B.A., M.D.
Assistant Attending, PSLH;
Associate, RMC

Wakefield, Howard, M.D.
Consulting, PSLH;
Emeritus Professor, RMC

Waxman, Jordan, B.S., M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC
(Neurological Sciences)

Willerson, W. Darrell, M.D.
Adjunct Attending, PSLH;
Visiting Instructor, RMC

Winter, Paul L., B.S., M.D.
Senior Attending, PSLH;
Associate Professor, RMC

Wolfe, Charles K., A.B., M.D.
Senior Attending, PSLH;
Associate Professor, RMC

Wolter, Janet, A.B., M.D.
Senior Attending, PSLH;
Assistant Professor, RMC

Wood, Willard L., M.D.
Consulting, PSLH; Emeritus
Professor, RMC

The Department of Internal Medicine includes the Sections of Cardio-Respiratory Diseases, Endocrinology and Metabolism, Gastroenterology, Hematology, Hepatology, Infectious Diseases, Oncology, Pharmacogenetics, Renal Disease and Nutrition, and Biostatistics and Experimental Design.

The Department has 300 beds in qualitatively similar medical units serving more than 9,000 patients per year. General medical, Health Center, Mile Square Health Center, Neurology and Dermatology patients, as well as those of other specialties, are assigned to all of these units. Each station is staffed by

a house staff team consisting of three interns and one or two residents. A Coordinator of Nursing is responsible for nursing service and teaching. A Unit Manager has administrative responsibility for each unit. Medical students are assigned to various units each quarter for medical experience and instruction.

The service and research laboratories of the Department cover six floors located in the Murdock, Rawson, Senn, Jelke and Southcenter buildings. The Allbright Seminar Room, the Departmental Library and administrative offices are on the tenth floor of the Jelke building. Each Section has a small library

and conference room located in its area.

Seventeen thousand outpatient visits per year are made to the medical clinics of the Presbyterian-St. Luke's Health Center. The medical outpatient clinics are on the first floor of the Senn and Rawson buildings and on the second floor of the Jelke and South-center buildings. Each medical clinic is a "home" clinic for continuity-of-care patients as well as a specialty clinic for consultation and research.

The attending staff participates actively in the program of teaching and patient care in both the inpatient and outpatient areas with service and house patients.

House staff education and experience begin in the internship year which consists of a one-year basic clinical program stressing the responsibility for fundamental diagnosis and medical care of the patients in both hospitalized and ambulant populations.

Four tours of approximately two months each are spent on general medical floors. During the year, a regular, half-day assignment is made to a specific medical clinic in order to stress continuity of patient care and long-term observation of patients and diseases.

A one-month assignment to Surgical Intensive Therapy offers experience in caring for patients with complicated medical and surgical disorders. The principal problems include machine respiration, cardiac pacemaker supervision, tracheotomy care, blood volume, and electrolyte management. A second month of Coronary Care Intensive Therapy is in the process of being organized. This will give a training intern extensive experience in cardiac disease and its complications.

A two-month elective assignment during the internship may be selected from any of the medical subspecialties, surgical subspecialties, Pediatrics, Psychiatry and Radiology. In the 1971 academic year, an Intern/Internist Program was begun which allows a one week's experience in the practice of a general internist.

Residencies in medicine are usually expected to provide a minimum of a two-year additional experience. The residency is block rather than pyramidal. A progressive increase in patient responsibility is programmed with three two-month periods during the first year when the resident is in charge of medical floors, and two two-month periods of floor assignment during subsequent years. Each resident continues his assignment of a "home" clinic with regular office hours throughout his entire period of training.

In addition to the floor and outpatient experience, the resident elects assignments of two months among the Sections of Cardio-Respiratory Diseases, Endocrinology and Metabolism, Gastroenterology, Hematology, Hepatology, Infectious Diseases, Oncology, Pharmacology and Genetics, and Renal Diseases and Nutrition. These sections, their full-time staff personnel and programs are described

separately. Rotations are also offered in the Departments of Dermatology, Neurological Sciences, Pediatrics and Psychiatry. The first year residents rotate through the Emergency Room-Triage area in a two-month block. This provides experience in the emergency handling of seriously ill patients under the supervision of the attending staff.

Individualization of programs is encouraged and other postgraduate programs are available. Further intensive experience beyond the residency is available in the programs of clinical and research fellowships offered by the various sections.

A chief residency is available to persons of advanced training status each year. This involves considerable supervisory duty and an adjunct staff appointment.

Applications Application for internship and residency should be made to the chairman of the department. Application for clinical or research fellowships should be made to the director of the section concerned.

Section of Cardio-Respiratory Diseases

Richard A. Carleton, M.D., Director

Joseph J. Muenster, M.D.

Marvin S. Rosenberg, M.D.

James G. Clark, M.D.

Armando Susmano, M.D.

Richard L. Hughes, M.D.

Stanley J. Heller, M.D.

Michael A. Colandrea, M.D.

John S. Graettinger, M.D., Consultant

The Section of Cardio-Respiratory Diseases provides consultation and laboratory services for patient care, teaching at the medical student and postgraduate levels, and investigative work in these areas. Section personnel include full-time physicians, part-time physicians and research fellows; residents in medicine and fourth year students rotate quarterly.

The section includes the electrocardiograph, vector and phonocardiograph, cardiac and respiratory laboratories in addition to laboratories for blood and air analysis, chemistry and physiology. A fully equipped animal laboratory is available for cardiovascular studies.

Request for other than routine tests involves a consultation between members of the section and the patient's physician, selection of pertinent special examinations to be performed, and interpretation of the data obtained at a daily report.

Medical residents are assigned patients whom they interview and follow through various laboratories. They interpret electrocardiograms and discuss them with the attending staff. Emphasis is placed on quantification of cardiac physiology.

The clinical and research fellows screen patients to receive laboratory testing. They perform cardiac catheterizations, angiography, and other procedures

on patients and laboratory animals. They also carry out studies of an investigative nature. The areas of research interest of the section include studies of the natural history of disease, quantification of ventricular function, application of electrophysiologic principles to the study of man, and diverse studies of hemodynamic abnormalities.

The section conducts formal teaching exercises in cardiology, consultation rounds, cardiac clinic, and daily cardio-respiratory reports. Clinical and research fellowships are available upon completion of a second or third year medical residency.

Section of Gastroenterology

William G. M. Hardison, M.D.,

The Josephine and Arthur Dyrenforth Director of Gastroenterology

The Section of Gastroenterology provides (1) consultation for patients with diseases of the gastrointestinal tract; (2) specialized diagnostic laboratory and clinical procedures; (3) formal and informal teaching of house staff and medical students in the subspecialty of gastroenterology.

The Sections of Hepatology and Gastroenterology offer a joint elective rotation for medical house staff. Medical residents see all patients requiring consultation from the two sections. In addition they participate in diagnostic procedures and become familiar with their limitations and physiologic interpretations. Reviews of pertinent x-rays give experience in interpretation of films concerned with the gastrointestinal tract.

Current research involves two areas: (1) bile salt metabolism in disease states and with drug administration, and (2) factors influencing gallstone formation. In the latter area, the first phase of this research is under way: investigation of factors regulating cholesterol and phospholipid concentration in hepatic bile.

Fellowships will be available. Fellows will share substantially in the consultation and teaching program. In addition, participation in clinical and basic research will be a major portion of the training. Research endeavors need not be limited to those listed above. Facilities are available for a wide range of research activities and some projects of interest to individual fellows may be arranged with the section personnel.

Section of Endocrinology and Metabolism

Theodore B. Schwartz, M.D., Director

Will G. Ryan, M.D., Associate Director

Frank O. Becker, M.D.

John T. Garland, M.D.

Ludwig Kornel, M.D., Ph.D.

Gretajo Northrop, M.D., Ph.D.

The Section of Endocrinology and Metabolism is

concerned with a rather broad but nonetheless intensive approach to both clinical, investigative and laboratory aspects of the discipline. In addition to providing consultations for patients, the section maintains a clinical endocrinology laboratory where determinations such as serum thyroxine, protein-bound iodine, insulin, growth hormone, glucagon and a variety of serum lipid determinations are made available.

The teaching program is active at all levels. In addition to regularly scheduled endocrinology conferences, the section accepts two medical students during the alternate quarter, three clinical and research fellows who function for a minimum of two years, and one or two medical residents who rotate through the section at two-month intervals.

There is an active research program on diabetes, fat and protein metabolism, metabolic bone disease and disorders of growth, including investigations of patients housed in the Rice Metabolic Research Unit. The Steroid Unit of the section performs determinations of serum and urinary steroids of various types and conducts a research program on steroid metabolism in essential hypertension.

Section of Hematology

Frank E. Trobaugh, Jr., M.D., The Elodia Kehm

Director of Hematology

William H. Knospe, M.D., Assistant Director

Richard J. Sasseti, M.D.

Henri Frischer, M.D.

Fedor Bachmann, M.D.

Paul Heller, M.D.

Patricia McFate, Ph.D.

James Bacus, Ph.D.

Edmund R. Cole, Ph.D.

Stephanie A. Gregory, M.D.

The Section of Hematology is concerned with patient care, research and training in the medical discipline of hematology. Formal training exercises involving all professional members of the Section of Hematology include daily patient-oriented conferences, teaching rounds, and bone marrow study sessions. Each resident in medicine may elect to study for a period of time in the section. During this time, he gains experience in the diagnosis and management of patients with hematologic diseases and the techniques of bone marrow aspirations and interpretations. He is also encouraged to participate in the research activities of the section.

Diagnostic studies regularly performed include the determination of red blood cell mass and total blood volume, red blood cell survival time, blood loss in feces or in menstrual flow and iron kinetics and characterization of the proteins of procedures. A multitude of coagulation screening tests, individual coagulation factor assays, fibrinolytic tests and platelet function studies are performed daily and allow an

accurate characterization of most bleeding disorders.

Active research is being conducted in the following fields: (1) Development of techniques for the optimum storage of bone marrow. (2) Study of the metabolism and genetics of hematopoietic tissue. (3) Investigations into the repopulating process of hematopoietic tissue in irradiated mice. (4) Study of the renewal migration and differentiation of hematopoietic stem cells. (5) Definition of the role of erythropoietin in maintaining erythroid production and blood volume. (6) Study of chromosome changes in hematopoietic malignancies. (7) Study of immunoglobulins in various disease states. (8) Determination of the role of abnormal serum globulins in altering serum viscosity. (9) Studies of immunologic effects of drug-protein interactions. (10) Study of the therapeutic effectiveness of new chemotherapeutic agents in malignant diseases of the hematopoietic system. These studies are being conducted in cooperation with the Southeastern Cancer Study Group. (11) Studies on the pathophysiology of disseminated intravascular coagulation. (12) Studies on the biochemistry and physiology of fibrinolytic activators.

Applicants interested in fellowships should apply directly to the director of the section.

Section of Hepatology

A. William Holmes, M.D., The Richard B. Capps
Director of Hepatology
Richard B. Capps, M.D., Consultant

The study of liver disease as pursued in the Section of Hepatology involves consultation, care, and investigation of clinical problems as well as laboratory investigation of the liver and its diseases.

Medical residents electing experience in the section see patients in consultation and, after appropriate training, perform liver biopsies when indicated. If their interests so direct, they may also take an active part in clinical or basic research. Formal teaching activities include hepatology rounds, liver biopsy study sessions, a liver clinic held each week in the Health Center and consultative rounds on patients with liver disease (mainly acute hepatitis) at Municipal Contagious Disease Hospital.

Research is primarily oriented to the study of the etiology and pathogenesis of human viral hepatitis. In addition to the study of patients, this involves as well work with marmosets (small South American primates) and a variety of *in vitro* microbiological systems. These studies are carried out in collaboration with the Department of Microbiology. Other areas of interest include the hepatic effects of drug use and drug addiction, the unique hepatic lesion of sickle cell disease, and the natural history, cause, and appropriate treatment of chronic active hepatitis.

Clinical fellowships are available in the section to individuals who have completed two years of medical residency. Research fellowships (ideally two years) are also available and involve collaborative work

between the section and one of the basic science departments.

Section of Infectious Diseases

Stuart Levin, M.D., Director
Laurence Edwards, M.D., Chief Surveillance Unit
Mark H. Lepper, M.D., Consultant
Charles K. Wolfe, M.D., Consultant
Robert Devetski, M.D., Consultant

The Section of Infectious Diseases provides consultation for patients with infectious diseases both in the hospital and Health Center. It is responsible for continuing surveillance of infections in all areas of the hospital and for appropriate preventive activities.

The teaching activities of the section include daily formal and informal consultative rounds.

The developing investigative activities of the section presently concern:

1. The study of the epidemiology and control of infections acquired during hospitalization. In this study, the hospital surveillance team's data are a major resource.
2. Clinical pharmacological studies of antibacterial chemotherapy.
3. Studies on the evolution of antibiotic-resistant organisms.
4. Participation in the Department of Preventive Medicine and Community Health's study of the epidemiology of infections in the community and their control.
5. An active relationship with the Municipal Contagious Disease Hospital continues. This includes mutual support of various research programs in hepatitis, pertussis, viral and bacterial meningitis, as well as the active participation of investigations of major citywide outbreaks, such as measles, diphtheria, and meningitis.
6. Facilities of the Department of Microbiology are available for investigation in the areas of bacteriology and virology.
7. Investigation of infectious etiologies of the rheumatic diseases.

Section of Oncology

Charles P. Perlia, M.D., Director
Robert E. Slayton, M.D.
Janet Wolter, M.D.
Samuel G. Taylor, III, M.D., Consultant

To the student, house physician, and primary physician, the word "cancer" is so frustrating that efforts used in improving the quality of survival of patients afflicted by other chronic diseases are frequently ignored when it comes to the management of the patient with cancer. The educational program of the Section of Oncology is aimed at demonstrating how patients with cancer can live the productive and useful life that patients with heart disease, nephritis, diabetes

and other chronic diseases frequently do.

Although early diagnosis of cancer is stressed in most other specialties, certain refined techniques aimed at this are included in the program of this section.

A continuous search for new techniques towards improving the management of the cancer patient is actively being investigated by cooperative efforts with the Departments of Surgery, Therapeutic Radiology, and Pathology, where a truly multidisciplinary approach to certain problems is in force.

The Section of Oncology offers an intern and resident rotation where opportunities are available for following inpatients and outpatients with cancer in all stages of the disease and with a variety of tumors. It also offers the participation in multidisciplinary tumor conferences.

An alternate quarter is available for the third and fourth year medical student in association with the Department of Therapeutic Radiology.

One to two year clinical fellowships are also offered through the American Cancer Society. Applications should be made through the director of the section.

The section is actively participating in evaluating new drugs, independently and in cooperation with the national cooperative groups (Eastern Cooperative Oncology Group).

Section of Pharmacogenetics

Paul E. Carson, M.D., Director

Karl H. Rieckmann, M.D., Chief, Laboratory for Tropical Diseases

Henri Frischer, M.D., Ph.D., Consultant; Chief, Laboratory for Red Cell Genetics

Harold Klawans, M.D., Consultant

Bernard Ecanow, Ph.D., Consultant

Louis Gdalan, Consultant; Director, Section of Pharmacy

This new section will provide consultation in clinical pharmacology, supervision and coordination of the pharmacology teaching program for medical students and house officers, and facilities for clinical and laboratory investigation.

Present areas of special interest include the role of enzymes and genetically determined alterations of enzymes in cellular and drug metabolism, the chemotherapy of malaria, the physical chemistry of drug distribution and the physiology and pharmacology of neurogenic amines as related to clinical disease. Students, house officers, and fellows will be encouraged to join in the clinical and investigational efforts of this section on a part time, quarterly or yearly basis.

Presently available facilities include the Laboratory for Red Cell Genetics, the Laboratory for Tropical Diseases and, when completed, additional facilities for research in these or other areas of pharmacogenetic interest.

Renal and Nutrition Section

Robert M. Kark, M.D., Director

Hermann Mattenheimer, M.D., Associate Director

I. B. Drummond Rennie, M.D.

Todd S. Ing, M.D.

Joseph H. Oyama, M.D.

Gordon Lang, M.D.

Max K. Horwitt, Ph.D., Consultant

Robert E. Johnson, Ph.D., M.D., Consultant

Roger D. Smith, M.D., Consultant

Patients with hypertension, disturbances of the urine, kidneys, and genito-urinary tract or generalized or localized disease processes involving these organs, as well as individuals with primary and conditioned nutritional and related metabolic problems are studied by the staff of the Renal and Nutrition Section. Special methods of diagnosis and treatment are used, and the laboratories of the unit are available for many special studies such as Millipore studies of urinary sediment, enzyme analysis of cells from nephrons, protein clearance studies, and nitrogen balances on patients treated by intravenous hyperalimentation. Beds are assigned for treatment of chronic renal failure by repetitive hemodialysis and transplantation. A close association exists with the Departments of Pathology, Surgery, Urology, Radiology, Biochemistry, Obstetrics and Gynecology, and Preventive Medicine in teaching, patient care, and research. The section is also interested in global, community, and preventive aspects of health and is involved in studies in the Mile Square Community Health Center aimed at early detection and control of infective, congenital and other forms of renal and urinary tract disease. In addition, cooperative studies have been done with colleagues in Jamaica, Peru, South Africa, Switzerland and Canada.

Each day there is teaching at the bedside by the staff and consultation on problem cases. Each week there is a formal conference with the renal pathologists to review tissues from patients who have had a renal biopsy. In addition, each week there is a Renal-Urologic-Radiologic Conference, a Urologic-Renal Conference, and a Renal and Nutrition Research Meeting.

Members of the resident staff are assigned to the section for two months at a time, and research fellowships and traineeships are available at the end of the second year of residency training. Usually there are from four to six research fellows in the section who assist the staff in outpatient and inpatient teaching and patient care. Applications for traineeships or fellowships should be made to the director of the section.

Section of Biostatistics and Experimental Design

Mitchell Passovoy, M.A., Director

The Section of Biostatistics and Experimental Design is a research-support facility serving the professional

staff of Presbyterian-St. Luke's Hospital. The services provided consist of (1) Consultation in the design and planning of experiments and surveys, as well as systems of data collection, storage and retrieval; (2) Data analysis; (3) Training programs consisting of courses in

- (a) Statistical methods in biology and medicine, and
- (b) Experimental design

These services are available to all hospital personnel engaged in basic biological research, clinical research, patient care, and hospital administration.

Department of Neurological Sciences

Maynard M. Cohen, M.D., Ph.D.

The Jean Schweppe Armour Chairman of Neurology

Avery, Loren W., B.A., M.D. Consulting, PSLH; Emeritus Professor, RMC (Psychiatry)	Garvin, John S., B.A., M.D. Senior Attending, PSLH; Visiting Professor, RMC (Psychiatry)	Ilahi, Muhammed M., M.B.B.S. Adjunct Attending, PSLH; Instructor, RMC	Page-El, Edward, B.S., M.D. Assistant Attending, PSLH; Assistant Professor, RMC (Pediatrics)
Bailey, Orville T., B.A., M.D. Consulting, PSLH; Visiting Professor, RMC	Grossman, Herbert J., B.S., M.D. Senior Attending, PSLH; Professor, RMC (Pediatrics)	Klawans, Harold L., Jr., M.D. Associate Attending, PSLH; Associate Professor, RMC	Ringel, Steven P., M.D. Adjunct Attending, PSLH; Instructor, RMC
Bailey, Percival, M.D. Consulting, PSLH; Emeritus Professor, RMC (Psychiatry)	Harrison, William H., B.S., M.S., Ph.D. Associate Professor, RMC (Biochemistry)	Mandlik, Kusum P., M.D. Assistant Professor, RMC	Shenker, David M., A.B., M.D. Adjunct Attending, PSLH; Instructor, RMC
Cohen, Maynard M., B.A., M.D., Ph.D. Senior Attending, PSLH; Professor, RMC	Hartmann, Francis J., A.B., Ph.D. Senior Attending, PSLH; Professor, RMC	McKendall, Robert R., B.A., M.D. Adjunct Attending, PSLH; Instructor, RMC	Waxman, Jordan, B.S., M.D. Assistant Attending, PSLH; Assistant Professor, RMC (Internal Medicine)
Davis, Floyd A., B.S., M.D. Associate Attending, PSLH; Associate Professor, RMC (Biomedical Engineering)	Herba, Edward J., M.D. Assistant Attending, PSLH; Assistant Professor, RMC	Michael, Joel, B.S., M.S.C., Ph.D. Associate Professor, RMC (Biomedical Engineering)	Weiner, William J., B.S., M.D. Adjunct Attending, PSLH; Instructor, RMC
	Huckman, Michael S., B.A., M.D. Associate Attending, PSLH; Associate Professor, RMC (Diagnostic Radiology)	Neer, David D., B.S., M.D. Adjunct Attending, PSLH; Instructor, RMC	Whisler, Walter, M.D., Ph.D. Senior Attending, PSLH; Professor, RMC (Neurological Surgery)

The Department of Neurological Sciences is responsible for inpatient and outpatient neurological services offering both consultation and direct patient care. Training in neurology and the related neurosciences is provided at the pre and post doctoral levels for undergraduates and house staff members, respectively.

The Neurology Residency Training Program is fully accredited. Three residents are appointed to the Department of Neurological Sciences each year. All residents have an opportunity to learn the fundamentals of clinical neurology in outpatient clinics and inpatient and consultation services. They have an opportunity to learn various special neurologic procedures, including spinal and cisternal puncture, neuro-ophthalmologic and neuro-otologic studies, electroencephalography, pneumoencephalography,

arteriography, and myelography.

The first year of the residency program is devoted to clinical services plus a rotation in electroencephalography. The second year consists of a 6 month full-time rotation in neuropathology and 6 months on the clinical inpatient-outpatient services. The final year includes separate rotations in neuropsychiatry, neuroradiology as well as a 6-month elective period that can be devoted to laboratory or clinical research, or to more specialized clinical training including neuro-ophthalmology, electromyography, etc.

Teaching exercises include weekly neurologic grand rounds and neuropathology conferences. Conferences and seminars are held in neuroradiology, neurochemistry, neurophysiology and neuroanatomy.

Department of Nuclear Medicine

Ernest W. Fordham, M.D., Chairman

Fordham, Ernest W., B.S., M.D. Senior Attending, PSLH; Professor, RMC (Diagnostic Radiology)	Rayudu, Garimella V., B.S., M.S., Ph.D. Associate Attending, PSLH; Assistant Professor, RMC	Shirazi, Syed P. H., M.B.B.S. Adjunct Attending, PSLH; Instructor, RMC
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Nuclear Medicine occupies a new 8,500 square foot facility, with a large modern radiopharmacy and gas laboratory. Equipment includes high speed single and dual probe scanners, scintillation cameras with rapid sequence capabilities for dynamic studies, automatic liquid scintillation and gamma counters, and other tracer and monitoring equipment. The Nuclear Medicine Department operates under the supervision of the isotope committee governing the broad medical license issued to the institution by the Atomic Energy Commission.

Well over 6,000 scanning procedures are performed yearly with routine scanning of most organs with short half lived isotopes. In addition, a modest number of tracer studies are also performed.

Department of Pediatrics

Joseph R. Christian, M.D., The Woman's Board
Chairman of Pediatrics

Balagtas, Rolando C., M.D.
Assistant Attending, PSLH;
Instructor, RMC
Biggs, Alfred D., M.D.
Emeritus, PSLH;
Emeritus Professor, RMC
Bohning, Anne, M.D.
Emeritus, PSLH;
Emeritus Professor, RMC
Brazie, Joseph V., B.S., M.D.
Senior Attending, PSLH;
Professor, RMC
Brocken, Cecilia, B.S., M.A., Ph.D.
Associate Attending, PSLH;
Assistant Professor, RMC
(Psychology and Sciences of Society)
Bucheleres, H. Gunther, M.D.
Senior Attending, PSLH;
Associate Professor, RMC
Butler, Craig D., M.D.
Emeritus, PSLH;
Emeritus Professor, RMC
Cabana, Emilio C., M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC
Christian, Joseph R., M.D.
Senior Attending, PSLH;
Professor, RMC
Dammers, Warren R., M.D.
Consulting, PSLH;
Lecturer, RMC
Dampitz, Robert E., M.D.
Assistant Attending, PSLH;
Instructor, RMC
(Psychiatry)
Elam, Harry P., B.S., M.D.
Associate Attending, PSLH;
Associate Professor, RMC
(Preventive Medicine)

Eriksen, Ronald G., B.S., M.D.
Adjunct Attending, PSLH;
Instructor, RMC
Gewurz, Henry, B.S., M.D.
Senior Attending, PSLH;
Professor, RMC
(Immunology)
Grossman, Herbert J., B.S., M.D.
Senior Attending, PSLH;
Professor, RMC
(Neurological Sciences)
Guiang, Sixto F., M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC
Hartnett, William T., M.D.
Adjunct Attending, PSLH;
Instructor, RMC
Henikoff, Leo M., M.D.
Assistant Attending, PSLH;
Assistant Professor and
Assistant Dean, RMC
Henn, S. C., M.D.
Emeritus, PSLH;
Emeritus Professor, RMC
Hyde, John S., B.S., M.D.
Senior Attending, PSLH;
Professor, RMC
Johnson, Frank R., S.B., M.D.
Senior Attending, PSLH;
Associate Professor, RMC
(General Surgery)
Jones, Clay H., Jr., B.A., M.D.
Senior Attending, PSLH;
Assistant Professor, RMC
(Preventive Medicine)
Jung, Eduard, M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC
Kallick, Charles, B.S., M.D.
Associate Attending, PSLH;
Assistant Professor, RMC
(Preventive Medicine)

The department now conducts a residency training program in Nuclear Medicine in addition to providing the nuclear medicine portion of training for both the diagnostic radiology and therapeutic radiology residency programs. Within the department or the institution as a whole, yearly courses are offered in physics; basic radioactive isotope techniques; refresher courses for board certification, and radiopharmaceutical workshops for technicians, physicians and radiopharmacists. Elective clerkship rotations are offered for medical students. The department participates in various grand rounds, conferences and daily discussions with house staff and medical students, correlating clinical problems with results of scanning procedures.

Keith, L. Eugene, B.S., M.D.
Associate Attending, PSLH;
Assistant Professor, RMC
Kiley, R. James, B.S., M.D.
Associate Attending, PSLH;
Assistant Professor, RMC
Kudchadker, Shashkikant, M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC
Kurup, Ramachandra, M.B.B.S.
Adjunct Attending, PSLH
Instructor, RMC
Limp, Charles, M.D.
Adjunct Attending, PSLH;
Instructor, RMC
Matthews, Janice, M.D.
Adjunct Attending, PSLH;
Instructor, RMC
Medenis, Rute, M.D.
Associate Attending, PSLH;
Associate Professor, RMC
(Internal Medicine)
Mercer, Jeanne K., M.D.
Adjunct Attending, PSLH;
Assistant Professor, RMC
Miller, Howard R., B.A., M.D.
Consulting, PSLH;
Assistant Professor, RMC
Miller, Robert A., M.D.
Consulting, PSLH;
Visiting Professor, RMC
Morales, Silvo D., M.D.
Senior Attending, PSLH;
Assistant Professor, RMC
Muenster, Joseph J., M.D.
Senior Attending, PSLH;
Associate Professor, RMC
(Internal Medicine)
Nelson, Karen B., A.B., M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC
(Preventive Medicine)

Pachman, Daniel J., M.D.
Consulting, PSLH;
Professor, RMC
Page-El, Edward, B.S., M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC
(Neurological Sciences)
Perez, Adolfo A., B.S., M.D.
Associate Attending, PSLH;
Assistant Professor, RMC
Proteau, Roseanne V., B.A., M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC
Puc, Frank C., B.S., M.D.
Associate Attending, PSLH;
Assistant Professor, RMC
Reddi, K. T., M.B.B.S.
Assistant Attending, PSLH;
Assistant Professor, RMC
Rosenthal, Ira M., A.B., M.D.
Consulting, PSLH;
Professor, RMC
Ryan, Mary Lynn, M.D.
Adjunct Attending, PSLH;
Instructor, RMC
Sanford, Heyworth N., M.D.
Emeritus, PSLH;
Emeritus Professor, RMC
Santucci, Barbara, B.A., M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC
Schulman, Irving, M.D.
Consulting, PSLH;
Visiting Professor, RMC
Schwartz, Donald P., B.A., M.D.
Adjunct Attending, PSLH;
Assistant Professor, RMC
Shakibi, Jami, M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC

Shanley, Luke A., B.S., M.S., Ph.D.
Assistant Attending, PSLH;
Assistant Professor, RMC
(Psychology and Sciences of Society)

Shaw, Noel G., M.D.
Emeritus, PSLH;
Emeritus Professor, RMC
Shmigelsky, Irene, B.A., M.D.
Associate Attending, PSLH;
Assistant Professor, RMC

Stepan, C. Edward, M.D.
Consulting, PSLH;
Assistant Professor, RMC
Stine, Robert H., B.S., M.D.
Adjunct Attending, PSLH;
Instructor, RMC

Strokosch, Gary R., B.A., M.D.
Adjunct Attending, PSLH;
Instructor, RMC
Swarts, Charles L., M.D.
Associate Attending, PSLH;
Associate Professor, RMC

The Department of Pediatrics inpatient unit includes beds for newborns, infants, children, and adolescents. The patient areas are divided into a section of Neonatology with separate nurseries for well babies, boarders, neonatal intensive care, prematures and observation; a pediatric surgical unit (including intensive therapy) of 30 beds; a general pediatric unit of 30 beds for infants and children 12 years of age and under; and 24 beds for adolescents and young adults 13 to 21 years of age.

The staff includes 15 full time, 11 part time and 21 volunteer members. The teaching program is compiled in such a way that medical student, intern and resident training is correlated. This type of training program results in an ever-increasing responsibility for the house staff to participate in academic teaching and research. Daily experience is directed primarily toward the understanding of basic principles and practices of pediatrics.

The inpatient admissions are approximately 6,000 per year with equal distribution of medical and surgical patients. Approximately one-half of the patient admissions are private.

The straight internship consists of an assignment to the inpatient, outpatient, emergency room pediatric services. There is a rotation through neonatal service, general pediatric medical, pediatric surgical, adolescent and young adult, and the pediatric emergency room.

Outpatient experience includes appropriate services as an integrated experience with the inpatient program. Specialty experience is available in general pediatrics and both pediatric medical and surgical specialty clinics. It is also available on an inpatient and outpatient basis in growth and development, preventive pediatrics, allergy, cardiology, endocrinology and metabolism, psychiatry, psychology, neurology, radiology, poison control, accident prevention and birth defects.

The pediatric residency program includes junior, senior, chief and sub-specialty positions. The junior resident rotates through the following services: outpatient, inpatient, neonatal, contagious disease, a special service in neurological services, allergy and cardiology.

The pediatric outpatient service includes daily general pediatric clinics and the following medical specialty clinics: adolescent, allergy, cardiology, child development, dermatology, renal, neonatal pathology and well baby. The outpatient services also include the following pediatric surgical specialty clinics: chest, dental, E.N.T., gynecology, neurosurgery, ophthalmology, orthopedics, plastic surgery,

general surgery, tumor, and urology. The number of outpatient visits per year approximate 60,000 in the Section of Ambulatory Pediatric Services.

The emergency room is staffed by interns and residents with consultation service by the full time and volunteer staff on a continuous basis. The neonatal nurseries are under the direction of the Division of Pediatrics. Approximately 300 infants are delivered each month. Under close supervision, the resident becomes acquainted with the newborn and premature child after discharge from the hospital. He also meets well and sick pediatric outpatients through daily attendance at the general pediatric clinic. The clinic also introduces him to medical school student teaching.

Inpatient responsibility and teaching experience are given to the junior resident under the direct supervision of a senior resident and volunteer or full time staff members. Attending pediatricians are used as supervisors and consultants to the pediatric residents.

The well baby clinic presents problems of growth and development, infant feeding, immunization, and adoption. This training includes developmental diagnosis and the emotional development of the infant and child.

The second year resident rotates through outpatient specialty services, inpatient services, child psychiatry, allergy, radiology, microbiology, cardiology, and contagious diseases. Cardio-respiratory diseases, including rheumatic fever, congenital heart defects, and collagen diseases are presented in the outpatient and inpatient services. The facilities of the cardio-respiratory laboratory and chest disease service are utilized as a combined program for pediatrics. The resident receives experience under direct supervision of a qualified pediatrician, internist, and surgeon. The resident may use full time and volunteer staff members as consultants. Student teaching and outpatient responsibility are increased during the second year. Students on the outpatient and inpatient services are assigned to the second year residents for teaching purposes during specific periods of the week.

Each resident is urged to initiate one research project under the direction of the full time staff. At least one publication is required during the two year period. Elective services in the sub-specialties in pediatrics are offered for 12 weeks during the second year of residency.

A third and fourth year of training is available in pediatric research and teaching. This graduate program is offered as an elective only to selected residents who have completed a two or three year program. Not all residents are expected to complete

three or more years of training. The graduate program consists of assignments in specialty services such as allergy, cardiology, hematology, endocrinology, neurology, psychiatry, metabolic diseases, neonatology, adolescence, infectious diseases, child development, and ambulatory pediatrics.

Section of Adolescent and Young Adult Medicine

Clay H. Jones, Jr., M.D., Director

Adolescent and Young Adult Medicine is rapidly becoming an important part of the practice of medicine. The section consists of an inpatient unit of 24 beds and an outpatient unit both geographically separated from the Pediatric areas. All patients in the 13 to 21 year old age groups are cared for in these areas. The house staff consists of medical and pediatric interns and pediatric residents who are assigned as part of their pediatric rotation. The section is administered jointly by the Departments of Pediatrics and Medicine. Medical, surgical and various sub-specialty patients are admitted to the unit and are the immediate responsibility of the assigned house staff. Surgical patients are cared for by the various surgical services; however, the assigned medical house staff is expected to be familiar with the problems and complications of the surgical patients and deal with them when necessary.

The aim of this section is to study and treat illnesses occurring in this age group, recognizing that this is a time of life of great physiological and psychological stress. Attention is therefore given to all aspects of disease. Special effort is made to keep hospitalization from becoming in any way a traumatic experience. Consultants in surgery, psychiatry, internal medicine and psychology are readily available.

The outpatient clinic serves as the home medical clinic, and although consultations are readily available, every effort is made to keep the patient in the home clinic rather than to have care administered only by a specialty clinic. Afternoon clinic appointments are scheduled to accommodate those patients who are employed or do not wish to miss school.

A monthly seminar is held to discuss various adolescent problems, organic as well as non-organic. All disciplines are represented, and particular attention is given the effect the home, socio-economic circumstances, education, and school may have on the outcome of a disease process. Identity problems, sexual problems, and drug problems are also discussed at length. Additional programs will be instituted during the coming year: a drug abuse team, closer liaison with the Department of Obstetrics and Gynecology in caring for the pregnant teenager, and expansion of our training the house staff officer in family planning and sex education.

Section of Ambulatory Pediatrics

Harry P. Elam, M.D., Acting Director

The diversified program in Ambulatory and Community Pediatrics is designed to prepare the Fellow for a career either in pediatric practice or in academic ambulatory pediatrics.

Clinics in the hospital outpatient department offer supervised experience in screening and crisis-care, comprehensive care, continuity care, preventive pediatrics, adolescent medicine and subspecialty clinics.

Beds are available for admission of patients on a non-quota basis. Although Fellows do not have inpatient obligations, they have the opportunity to follow their own patients during hospitalization. The availability of beds for admission and the availability of visiting nurses for follow-up care help assure continuity of care.

The program affords an opportunity to work with multidisciplinary groups dealing with children with learning disorders, developmental problems and multiple handicaps. Experience is gained in the effective utilization of various disciplines such as nutritionists, psychologists, public health nurses, social workers and community agencies.

Fellows participate in pediatric grand rounds and multidisciplinary conferences. Arrangements are made with staff pediatricians for the Fellow to gain experience in office pediatrics. The flexibility of the program allows the interested Fellow to emphasize certain aspects of ambulatory care, e.g., developmental pediatrics.

Fellows assume a teaching responsibility for four to six junior medical students to Ambulatory Pediatrics each quarter. In addition, each fellow undertakes an investigative project of his own choosing. Special assignments include: formal outpatient case conferences, presentations to neurologists, cardiologists, infectious disease consultants, hepatologists, and other visiting or regular consultant services available to the clinic. The Section of Ambulatory Pediatrics is involved in research in innovative methods of providing ambulatory care which includes exploration of unification of private and clinic practice to provide one standard of medical care for children.

There are approximately 60,000 annual visits in the Section of Ambulatory Pediatric Services. A one or two year program is available to applicants who have completed two years of approved pediatric internship-residency training.

Section of Newborn Medicine

Joseph V. Brazie, M.D., Director

The Newborn Service has 3,000 babies a year admitted from mothers delivered at Rush-Presbyterian-St. Luke's Hospital. Approximately one third are private patients; the balance are admitted primarily through Rush-Presbyterian-St. Luke's Health Center

and Mile Square Health Center. A full spectrum of newborn care is provided in the observation nursery, well baby nurseries, premature nursery and special care nursery areas. A comprehensive perinatal approach is emphasized with close cooperation of the obstetric service.

Pediatric first and second year trainees are assigned to the newborn service for three months rotation; the first year trainee has direct responsibility for patient care under the supervision of the second year trainee and the newborn service staff. Trainees from other services occasionally may be assigned to the newborn service. Third year medical students spend part of their pediatric clerkship in the newborn service. Also, fourth year medical students may elect a newborn service rotation with patient care responsibility under supervision of the nursery staff.

A third year pediatric trainee or clinical fellow in newborn medicine supervises patient care, assists with teaching and service activities, and participates in research and other special projects. Rounds are held daily, and weekly conferences are oriented toward a perinatal approach to newborn problems.

The special nursery clinic provides followup continuity of care for those babies with continuing problems related to the perinatal period after they have been discharged from the nursery. Well child care is provided in clinics oriented toward normal growth and development and prevention of disease.

Section of Allergy and Clinical Immunology

John S. Hyde, M.D., Director

Allergy-clinical immunology training includes both inpatient and outpatient experience. The first year resident spends approximately 80 per cent of his time with patients in the pediatric or adult clinics. Teaching consists of informal ward rounds, journal club, immunology lectures, basic science seminars and patient presentation conferences.

By prior individual arrangement the resident has the option to spend two or three months each, on a part time basis, in at least two of the following outpatient clinics or laboratories: dermatology, otolaryngology, child psychiatry, pulmonary function, microbiology and research immunology.

Basic and clinical immunology studies include one quarter formal lectures and laboratory work in the graduate department of microbiology of the Rush Medical College. Application of the tools of clinical immunology include total circulating eosinophils and nasal smears for eosinophils, quantitative immunoglobulin determinations, immuno-electrophoresis, passive transfer tests, migration-inhibition tests, blast transformation, histamine release from leukocytes, etc.

The resident is expected to see as many hospitalized patients as possible with hypersensitivity disease, at-

tend the outpatient services and the emergency room. In these three areas, consultations are made by the allergy clinical immunology trainee in the presence of a certified allergist. Responsibility for the care of allergy-immunology patients is usually assumed by the resident after six months of supervised experience. Upon assuming consultation responsibilities, the resident and his work are subject to review by a member of the pediatric allergy staff. The allergy-immunology outpatient facility consists of three clinics at the Presbyterian-St. Luke's Hospital.

During their residencies in the section, residents are involved in various research projects. The first year resident works on an investigative problem already in progress. The second year resident is expected to devote at least half of his time to a specific research study—sometimes purely laboratory study and sometimes partly clinical study. Programs for advanced degrees, M.S. and Ph.D., can be arranged on an individual basis while the trainee is pursuing his work in the section. This special arrangement was not established to discourage candidates who wish to become practicing consultants in the subspecialty but to permit a broad spectrum in the program.

An ancillary program in adult allergy is available through the co-operation of the allergy unit of the Department of Medicine under the supervision of Max Samter, M.D., professor of medicine, Abraham Lincoln School of Medicine. This program consists of three hours per week for one year at the outpatient clinic of the University of Illinois Hospital, plus two hours per week for three months at the West Side Veterans Administration Hospital.

Section of Pediatric Cardiology

H. Gunther Bucheleres, M.D., Director

The section staff consists of three full-time pediatric cardiologists. The program is approved for two years of training required for certification in this subspecialty. Residents in their general pediatric training are assigned for a three months rotation. The section provides an elective clerkship for medical students.

Three hundred to 350 patients are admitted to the inpatient service per year. Approximately 1,200 outpatient examinations are conducted in several clinics.

Training is given in all aspects of clinical and laboratory diagnosis of heart disease in children. Clinical conferences, ward rounds and responsibility as a consultant to the pediatric house staff develop the trainees' experience in bedside diagnosis and therapy. Laboratory techniques are acquired in the Cardio-Respiratory Laboratory, which is equipped with excellent facilities for diagnostic and investigative endeavor. Members of the laboratory staff share the teaching of cardiopulmonary physiology. Annually between 180 to 200 cardiac catheterization studies are performed in infants and children.

Approximately 120 children undergo cardiovascular surgical procedures during the course of a year. Surgery is preceded by a conference with the surgical staff. The members of the Section of Pediatric Cardiology participate in intra- and postoperative patient care. Most children return directly from the operating room to the Pediatric Intensive Care Unit.

Detailed analysis of the pathologic anatomy of cardiovascular disease is pursued in collaboration with the Congenital Heart Disease Research and Training Center (Dr. M. Lev, Director) located in the immediate neighborhood of our institution. Our trainees in Pediatric Cardiology enhance their knowledge of embryology and cardiopulmonary pathology during assignments of one month per year to the Center. Dr. Lev conducts pathology conferences at Presbyterian-St. Luke's Hospital on a regular basis. Over 90 per cent of the 30 to 35 children with heart disease who have died annually during recent years at our institution underwent postmortem examination.

Birth Defects Special Treatment Center

Joseph R. Christian, M.D., Pediatrician Coordinator
Katherine Baar, R.N., Nurse Coordinator

The program in the Birth Defects Special Treatment Center is a multidisciplinary approach offering complete, comprehensive and coordinated care for children with birth defects. Attention is given not only to the medical problems, but also to the complex economic, psychological, and social problems which confront the young victim and his family. The philosophy of the Center is complete care for the child with any congenital defect, preserving the realization that he is a totally developing individual.

The Center is directed by a full-time pediatrician and nurse-coordinator. The team includes physicians skilled in various medical and surgical specialties, as well as personnel qualified in providing physical and occupational therapy, educational and vocational planning and all aspects of habilitation and rehabilitation. Facilities, services, and devices are available as necessary for both the in-patient and the out-patient. Continual evaluation and provisions for long term follow-up are adequately provided, so that there is a continuity of patient care in all aspects.

The pediatrician coordinates the planning and implementation of diagnostic testing and evaluation of each patient. He directs and coordinates the functions of the Center's staff in the management of each patient.

Child Development Center

Joseph R. Christian, M.D., Program Director

The Child Development Center established in the Department of Pediatrics at Rush-Presbyterian-St.

Luke's Medical Center provides facilities and services for children with learning disabilities and/or behavioral problems in the school setting. Patients are accepted on a referral basis from physicians, schools, hospitals, and other institutions which provide care for children.

Patients from birth to 18 years of age are eligible but a range of three to 12 years of age is preferred. Patients with the following characteristics are also appropriate for referral.

1. Children with neurological defects such as impaired vision or hearing, brain damage, seizures, cerebral palsy, etc.
2. Children suspected to be mentally handicapped but not definitely classified.
3. Underachievers in school settings who appear to be neurologically and mentally normal.
4. Children suspected of having moderate to severe emotional disturbances may be cleared through the center, however, most of these will be referred directly to child psychiatry.

The center offers a comprehensive program for diagnostic and therapeutic management for approximately 300 new patients and 1,000 patients annually.

The Center staff includes a pediatrician as program director, a consultant pediatrician, two associate pediatricians, and a consultant clinical psychologist. Consultants to the center staff are available in pediatric neurology, electroencephalography, neurosurgery, orthopedic surgery, pediatric allergy, ophthalmology and otolaryngology. Ancillary specialists are available in speech and hearing (diagnosis and therapy) special education, medical social service, nursing and occupational therapy.

Medical students, interns and residents are assigned to the center as a part of the pediatric service rotation. The medical student and pediatric intern receive formal instruction in normal and abnormal growth and development and participate in case discussions under direct supervision of the staff. The resident assumes responsibility with consultative supervision for patient evaluation, diagnosis and treatment. The consultative supervision is provided in the regularly scheduled staffing conferences during which cases are presented.

Section of Community Pediatrics

Mile Square Health Center

Frank Puc, M.D., M.P.H., Director

The development of the neighborhood health center represents a relatively new approach to comprehensive family-oriented medical care for poverty areas. The Mile Square Health Center serves a community of 23,000, half of which are in the pediatric age group. The philosophy of the center is continuous, coordinated, comprehensive care.

All general pediatric care is rendered in the Center. Routine laboratory and radiological services are

available on the premises. Patients requiring inpatient or outpatient consultation or special diagnostic services are referred to Presbyterian-St. Luke's Hospital.

A program for the training of Nurse-Associates has been functioning since inception of the Center in 1967. Nurse-Associates function in the preventive aspect of the pediatric care and in "pediatric screening."

Medical students from Rush Medical School are being offered an opportunity to get their community pediatric experience here. The purpose is to get an overview of community pediatrics.

All pediatricians working 50 percent or more of their time at the Center are on the staff at Presbyterian-St. Luke's Hospital and have a faculty appointment at Rush Medical School.

Pediatric Infectious Disease Program

The Pediatric Infectious Disease Program was established to develop programs in infectious diseases within the pediatric setting. Clinical research is related to the study of incidence and types of infectious diseases within the institution. Basic research is involved in the study of the possible etiology of collagen disease. Utilization is made of the patient care area at Rush-Presbyterian-St. Luke's Medical Center and the Infectious Diseases Unit of Municipal Contagious Disease Hospital. Close liaison is maintained with the Department of Medicine, Section of Infectious Diseases. Research, daily teaching conferences and regularly scheduled teaching rounds are conducted by the director and the section chief of Infectious Diseases of the Department of Medicine. A resident is regularly assigned for a three-month period to the Municipal Contagious Disease Hospital for special training in communicable diseases. A one-year fellowship training program in pediatric infectious diseases is currently offered. Areas of particular interest in this Section are respiratory infection (viral, diphtheria, common myxovirus) and the infectious

etiology of systemic lupus erythematosus.

Pediatric Psychology Program

C. Brocken, Ph.D., Program Director

The Pediatric Psychology Program, an integral part of the Department of Pediatrics, was established to develop psychological programs within the pediatric milieu. It strives to facilitate maximum collaboration between the medical and behavioral sciences in the comprehensive care of the pediatric patient. The Pediatric Psychology staff includes two Ph.D. clinical psychologists and a reading specialist/educational consultant. They provide diagnostic testing, educational therapy, and psychotherapy for children and adolescents. The children and adolescents seen represent the full gamut of psychological and psychoeducational disorders. Every effort is made to involve the pediatrician, the family, and the school at every level of diagnosis and/or therapy.

An additional goal to the more traditional one of diagnostic and therapeutic services is the development of programs for the normal child and adolescent under the stress of illness and hospitalization. The main objective of these programs is to maximize the total therapeutic aspects of the hospital milieu. These programs are designed to help the patient cope with the psychological demands of illness and hospitalization, through such means as puppet theatre for pre-operative patients, play therapy for young children, and talk groups for young adults.

Medical students, interns and residents are encouraged to consult the staff, not only in regard to individual inpatients and outpatients, but also to participate in case conferences. The staff is always open to conduct teaching seminars on particular topics of interest to current students, interns and residents. On a formal level, each of the staff is involved in curriculum development and teaching in the Rush Medical School.

Department of Preventive Medicine

Joyce C. Lashof, M.D., Chairman

Bonbreast, Helen C., A.B., M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC
(Internal Medicine)

Eckenfels, Edward, M.A.
Assistant Professor, RMC

Elam, Harry P., B.S., M.D.
Associate Attending, PSLH;
Associate Professor, RMC
(Pediatrics)

Exum, Dolores B., B.A., M.S.W.
Instructor, RMC
(Psychology and Sciences of Society)

Hoffberg, George H., B.S., M.P.H.
Instructor, RMC

Jones, Clay H., Jr., B.A., M.D.
Senior Attending, PSLH;
Assistant Professor, RMC
(Pediatrics)

Kallick, Charles, B.S., M.D.
Associate Attending, PSLH;
Assistant Professor, RMC
(Pediatrics)

Kassriel, Robert S., A.B., M.D.
Assistant Attending, PSLH;
Instructor, RMC

Klinger, Alfred D., B.S., M.D.
Adjunct Attending, PSLH;
Associate, RMC
(Internal Medicine)

Lashof, Joyce C., A.B., M.D.
Senior Attending, PSLH;
Professor, RMC
(Internal Medicine)

Lepper, Mark H., B.A., M.D.
Senior Attending, PSLH;
Professor and Dean, RMC

Levin, David, B.A., M.S., M.A.
Assistant Professor, RMC

Levine, Charlotte C., B.A., M.D.
Adjunct Attending, PSLH;
Instructor, RMC
(Internal Medicine)

Levine, Milton D., B.A., S.C.D., M.D.
Senior Attending, PSLH;
Associate Professor, RMC
(Internal Medicine)

Meyer, John H., M.D.
Adjunct Attending, PSLH;
Associate, RMC
(Internal Medicine)

Nelson, Karen B., A.B., M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC
(Pediatrics)

Noble, Barbara W., B.S., M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC
(Internal Medicine)

Pomerantz, Rhoda S., A.B., M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC
(Internal Medicine)

Post, John, M.D.
Consulting, PSLH;
Visiting Assistant Professor,
RMC (Internal Medicine)

Scheiner, David L., B.A., M.D.
Assistant Attending, PSLH;
Associate Professor, RMC
(Internal Medicine)

Schoenberger, James A., B.S., M.D.
Senior Attending, PSLH;
Professor, RMC
(Internal Medicine)

Steinberg, Harold H., M.D.
Senior Attending, PSLH;
Associate Professor, RMC

The Department of Preventive Medicine was newly established in 1971 with the opening of Rush Medical College. The Department has as its goal the development of active programs of teaching, research and planning in the areas of Health Care Delivery, Preventive Practices, Ecology and Epidemiology, Occupational and Environmental Health.

The Department of Preventive Medicine, although new, has grown from what was formerly a Section of Community Medicine of the Department of Medicine. Thus the Department already has an active program of research in medical care, and the preventive aspects and epidemiology of chronic disease.

It was under the direction of the Section of Community Medicine that the Mile Square Health Center, a neighborhood health center serving a population of 25,000 was developed. Studies on utilization of health services, hospitalization rates and cost analysis are being carried out within the center.

The medical director of ANCHOR (a health maintenance organization) is a member of the department and plays a major leadership role in developing new models for health care delivery. The department is actively working with the vice president for health care planning in designing an interrelated network of health maintenance organizations which includes the total medical care planning for a new city.

The Medical Center is also developing a network of affiliated hospitals and the department jointly with the vice president for health care planning is designing studies to evaluate the impact of such affiliations on health care delivery.

The medical director of the Presbyterian-St. Luke's Hospital Health Center is also a member of the department and is also engaged in program planning and evaluation of new forms of delivery of primary health care. The department currently has a grant in conjunction with the Division of Nursing for the training of medical nurse associates. This will include studies on role function and evaluation

of the health care team.

The department also serves as a consultant to Geomet, a systems analysis research firm now developing computer simulation models of a health care delivery system under a grant from the National Center for Health Services Research.

Two ongoing research projects of the department are in the field of preventive practices and chronic disease epidemiology. A clinical unit of the National Cooperative Study of Coronary Disease, a long term study of the effect of drugs on mortality of post-myocardial infarct patients is based in the department. In addition, investigation of hypertension in urban, suburban and rural communities—including evaluation of case finding methods and long term management of hypertension—is being carried out. Other studies include development and evaluation of multiphasic screening techniques in relationship to reduction of risk for coronary heart disease.

Two members of this department have been quite active as consultants to the Milton Olive III Memorial Corporation, a grass-roots community organization, which operates a health research program in Holmes County, Mississippi under a grant from the National Center for Health Services Research and Development. The Holmes County Health Project deals with a broad spectrum of rural health problems as well as a study of migration. The consultants from this department have been most active in aiding in the development of a population census and in coordination of the many facets of the program. In addition they are taking primary responsibility in instituting a community wide program for the control of hypertension.

Elective experience is available in the department for any resident interested in furthering his training in health care planning, medical care research and epidemiology. He may elect to participate in any of the studies or programs described above and/or develop his own research program under supervision.

Department of Psychiatry

Jan A. Fawcett, M.D., The Stanley G. Harris
Chairman of Psychiatry

Alexander, Harlan G.,
B.A., M.D.
Adjunct Attending, PSLH;
Instructor, RMC

Armstrong, Claesa, M.S.,
M.D.
Associate Attending, PSLH;
Assistant Professor, RMC

Avery, Loren W., B.A.,
M.D.
Consulting, PSLH;
Emeritus Professor, RMC
(Neurological Sciences)

Bailey, Percival, M.D.
Consulting, PSLH;
Emeritus Professor, RMC
(Neurological Sciences)

Berger, Jack C., B.S., M.D.
Adjunct Attending, PSLH;
Assistant Professor, RMC

Bolin, Richard, M.D.
Senior Attending, PSLH;
Assistant Professor, RMC

Buck, David, W., B.S., M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC

Carlock, William D., A.B.,
M.D.
Adjunct Attending, PSLH;
Instructor, RMC

Charles, Andrew V., B.A.,
M.D.
Adjunct Attending, PSLH;
Instructor, RMC

Dampitz, Robert E., M.D.
Assistant Attending, PSLH;
Instructor, RMC (Pediatrics)

Dederick, Margarida M.,
B.S., M.D.
Adjunct Attending, PSLH;
Instructor, RMC
(Internal Medicine)

Drom, Robert E., B.S., M.D.
Assistant Attending, PSLH;
Instructor, RMC

Ebenhoeh, Patrick E., M.D.
Associate Attending, PSLH;
Assistant Professor, RMC

Elbert, Jean C., B.A., M.A.
Instructor, RMC
(Psychology and Sciences
of Society)

Fawcett, Jan A., B.A., M.D.
Senior Attending, PSLH;
Professor, RMC

Garvin, John S., B.A., M.D.
Senior Attending, PSLH;
Visiting Professor, RMC
(Neurological Sciences)

Gerty, Francis J., B.S., M.D.
Consulting, PSLH;
Emeritus Professor, RMC

Ginsberg, James P., B.A.,
M.D.
Senior Attending, PSLH;
Assistant Professor, RMC

Guise, Gracia, B.S., M.S.
Assistant Attending, PSLH;
Associate, RMC
(Psychology and Sciences
of Society)

Gwyer, Fred V., B.S., Ph.D.,
M.D.

Assistant Attending, PSLH;
Assistant Professor, RMC

Halper, Ira S., B.A., M.D.
Associate Attending, PSLH;
Assistant Professor, RMC

Hanni, John W., A.B., M.D.
Senior Attending, PSLH;
Professor, RMC

Hefter, Gilbert, A.B., M.D.
Adjunct Attending, PSLH;
Assistant Professor, RMC
(Internal Medicine)

Hovde, Christian A., Ph.D.
Consulting, PSLH; Visiting
Assistant Professor, RMC

Katz, Jerome I., B.S., M.S.,
M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC

Keller, Elizabeth, M.D.
Adjunct Attending, PSLH;
Instructor, RMC

Kempton, Leo V., B.S.,
M.D.
Associate Attending, PSLH;
Assistant Professor, RMC

Klapman, Howard J., A.B.,
M.S., M.D.
Adjunct Attending, PSLH;
Instructor, RMC

Koenig, Richard C., M.D.
Associate Attending, PSLH;
Assistant Professor, RMC

Kuhl, Dorothy L., A.B.,
M.D.
Assistant Attending, PSLH;
Instructor, RMC

Lane, Harold J., B.S., M.D.
Adjunct Attending, PSLH;
Instructor, RMC

Langner, Herman P., B.A.,
M.D.
Adjunct Attending, PSLH;
Instructor, RMC

Mason, Norma, A.B., M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC

McMillan, Robert G., B.S.,
M.D.
Senior Attending, PSLH;
Associate Professor, RMC

Mena-Franco, Josefa, M.A.
Instructor, RMC
(Psychology and Sciences
of Society)

Miller, Raymond N., A.B.,
M.D.
Associate Attending, PSLH;
Assistant Professor, RMC

Morrison, Donald A. R.,
B.S., M.D.
Senior Attending, PSLH;
Associate Professor, RMC

Nielson, Paul E., B.A., M.S.,
M.D.
Senior Attending, PSLH;
Professor, RMC

(Obstetrics and Gynecology)

Norton, Arthur H., B.S.,
M.D.

Senior Attending, PSLH;
Associate Professor, RMC

O'Donnell, John W., B.S.,
M.D.
Assistant Attending, PSLH;
Instructor, RMC

Perkins, George, P.H.B.,
M.D.
Associate Attending, PSLH;
Assistant Professor, RMC

Pieper, William J., B.S.,
M.D.
Associate Attending, PSLH;
Assistant Professor, RMC

Rosenthal, M. J., M.D.
Associate Attending, PSLH;
Assistant Professor, RMC

Sable, Arthur D., M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC

Sabshin, Melvin, M.D.
Consulting, PSLH;
Visiting Professor, RMC

Scharf, James F., B.S., M.D.
Adjunct Attending, PSLH;
Instructor, RMC

Schwarz, Marvin, M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC

Smith, Garth D., B.A., M.D.
Associate Attending, PSLH;
Assistant Professor, RMC

Solomon, Alfred P., B.A.,
M.D.
Senior Attending, PSLH;
Professor, RMC

Steed, David W., B.A., M.D.
Senior Attending, PSLH;
Associate Professor, RMC

Turk, Charles E., A.B., M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC

Urse, Vladimir G., B.S.,
M.D.
Senior Attending, PSLH;
Professor, RMC

Wilkerson, Douglas C., B.S.,
M.D.
Adjunct Attending, PSLH;
Assistant Professor, RMC

Wolff, John R., M.S. M.D.
Senior Attending, PSLH;
Professor, RMC

(Obstetrics and Gynecology)

Wright, Donovan G., B.M.,
M.D.
Senior Attending, PSLH;
Professor, RMC

Adult Psychiatry Residency Training A fully accredited three year program provides broad, intensive, supervised experience leading to an understanding of individual emotional problems within the context of the family and the community. A dynamic orientation is maintained; however, experience is eclectic including the various somatic therapies. Training in teaching methods and introduction to research is an integral part of the program. Elective clinical training in neurology and neuro-pathology is provided.

A new and completely modern hospital addition contains a psychiatric unit consisting of 62 beds in

open and closed sections, including a day hospital facility. An outpatient psychiatric clinic attracts a wide variety of patients excellently suited to diagnostic work and long term psychotherapy. Experience in psychosomatic medicine and liaison work is provided in the general hospital setting. Experience with treatment of children and adolescents is provided during a rotation on the child psychiatry service, which includes a unique inpatient treatment team and a day hospital for children.

The resident begins his training with intensively supervised inpatient study. First year seminars cover

fundamentals of interviewing psychopathology, psychotherapy and the basic principles of group interaction as demonstrated in the controlled inpatient milieu. The second and third years are modified to individual interests with emphasis on outpatient psychotherapy, group and family therapy and marriage therapy. Seminars dealing with advanced psychiatric topics are provided. A community psychiatry rotation is elective utilizing the Comprehensive Health Care Clinic operated by the Hospital in a neighborhood poverty area. In every area of training the resident is provided with excellent supervision.

Residents are encouraged in their individual interests and the program can be modified to augment development and experience in a special area. Special interest areas include hospital psychiatry, group and family treatment, child and adolescent psychiatry, and community psychiatry.

For residents who are interested in psychoanalysis, the post residency training is available at the Chicago Institute for Psychoanalysis. Arrangements for this training are made on an individual basis.

Residents who are eligible for a United States Public Health grant may receive augmented salary and dependency allowances. The basic salary for residents is 1st year \$10,344, 2nd year \$10,939, and 3rd year \$11,646 (plus laundry, uniforms, insurance). **Child Psychiatry Training Program** The Section of Child Psychiatry offers a fully approved two year residency in the subspecialty of child psychiatry. Four qualified candidates are matriculated each year. The program consists of specialized training in the clinical, consultative and administrative skills appropriate to the field of child psychiatry. The development of diagnostic and therapeutic skills is but one objective of the training program. A constant review of estab-

lished ideas by the staff and trainees is encouraged with the aim of an ongoing examination of the traditional theoretical models operant in the realm of child and adolescent development. Programs are offered in child and adolescent in-patient, out-patient, day hospital, and community psychiatry areas. This affords flexibility over the two year period of training for multi-disciplinary approaches as well as elective involvement for special interest such as teaching, clinical practice, research and administration. Stipends vary from \$10,000 to \$11,000 depending upon training and experience.

Clinical Psychology Internship Programs Clinical training offered by the Section of Psychology emphasizes understanding of the life adaptations of children and adults. Five specialization programs are offered: general clinical psychology, community psychology, clinical child psychology, clinical neuropsychology and clinical psychological research. Programs are structured to develop professional competence in diagnosis, treatment and research of pathological adaptations; approaches to prevention and early amelioration are stressed as well.

Intensive individual supervision guides training experience in the psychiatric, pediatric, general medical and community settings. Emphasis is placed on the contribution the clinical psychologist may make in each setting. These programs fulfill the internship requirement of a Ph.D. program in clinical psychology as approved by the American Psychological Association. Internship appointments are for a full-time year.

The training stipend is \$4,600 and dependency allowances or the appropriate National Institute of Mental Health stipend.

Department Chairmen

Max S. Sadove, M.D.

Anesthesiology

Ormand C. Julian, M.D., Ph.D.

Cardiovascular-Thoracic Surgery

Harry W. Southwick, M.D.

General Surgery



Walter W. Whisler, M.D., Ph.D.

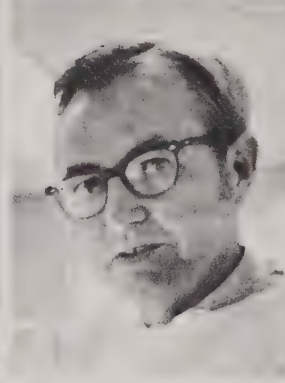
Neurological Surgery

George D. Wilbanks, M.D.

Obstetrics & Gynecology

William F. Hughes, M.D.

Ophthalmology



Jorge O. Galante, M.D.

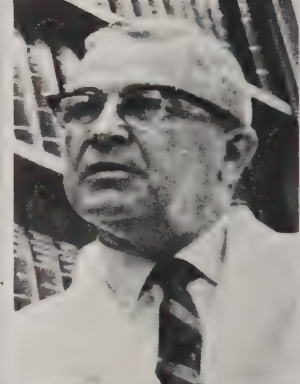
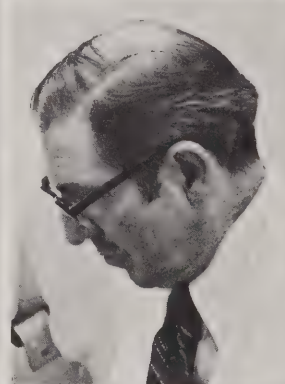
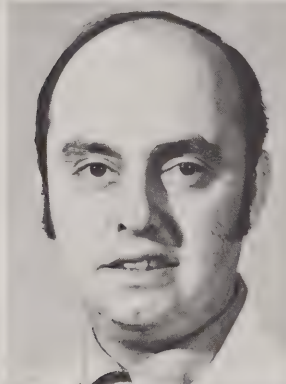
Orthopedic Surgery

Stanton A. Friedberg, M.D.

Otolaryngology and
Bronchoesophagology

George M. Hass, M.D.

Pathology



John W. Curtin, M.D.

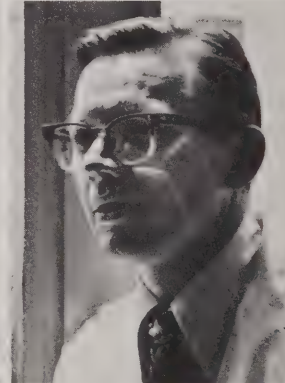
Plastic and Reconstructive Surgery

Frank R. Hendrickson, M.D.

Therapeutic Radiology

Jack E. Mobley, M.D.

Urology



Department of Anesthesiology
Max S. Sadove, M.D., Chairman

Acuna, Antonio, B.S., M.D. Assistant Attending, PSLH; Assistant Professor, RMC	Heckel, V. Eileen, B.S., M.D. Senior Attending, PSLH; Associate Professor, RMC	Morch, E. Trier, M.D., Ph.D. Senior Attending, PSLH; Professor, RMC	Sadove, Max S., M.D. Senior Attending, PSLH; Professor, RMC
Badrinath, Shyamala K., M.B.B.S. Assistant Attending, PSLH; Assistant Professor, RMC	Katz, David, B.S., M.D. Senior Attending, PSLH; Associate Professor, RMC	Murphy, Peter, B.C.H. Associate Attending, PSLH; Assistant Professor, RMC	Thomason, Richard D., M.D. Associate Attending, PSLH; Assistant Professor, RMC
Ecanow, Bernard, Ph.D. Consulting, PSLH; Visiting Professor, RMC	Keane, Donal M., M.D. Assistant Attending, PSLH; Assistant Professor, RMC	Nakabayashi, Kozo, B.S., Ph.D. Instructor, RMC	Tsang, Hung-Shing, M.B. Assistant Attending, PSLH; Assistant Professor, RMC
	Lyons, Mary, M.D. Emeritus, PSLH; Emeritus Professor, RMC	Redlin, Thomas A., B.S., M.D. Assistant Attending, PSLH; Assistant Professor, RMC	Yelin, Samuel, M.D. Associate Attending, PSLH; Assistant Professor, RMC

The Department of Anesthesiology offers a graded three year residency program, which allows residents to be assigned to cases of continually increasing complexity that require increasing skills pertinent to anesthesia. Residents proceed at an individualized pace relative to their acquisition of skills.

The first year resident is introduced to the classical agents, such as ether, nitrous oxide and their combinations with barbiturates and narcotics. This provides a good background for progress to the more potent agents such as cyclopropane and the fluorinated hydrocarbons.

The ability to perform endotracheal intubation is developed very early in the training period. He learns the technique of intubation through the nasal route under laryngoscopic vision, the "blind" nasal technique, and the technique of oral intubation.

Early in the first three months, the first year resident masters the use of spinal anesthesia with emphasis on the hyperbaric solutions. As he gains proficiency he is introduced to other spinal techniques, such as those using hypobaric solutions, continuous spinal anesthesia and epidural anesthesia.

The resident spends some time in this first year

covering obstetrical anesthesia, with emphasis on skills he has already acquired in regional anesthesia.

The second year resident gives increasing attention to patients undergoing more major surgery with emphasis on cardiovascular-thoracic cases. There will be increasing exposure to those major cases requiring regional anesthesia. He participates in the management of pain problems and he will be able to perform sympathetic blocks and blocks at various somatic levels in the management of these patients. In addition, during this period the resident becomes more involved in the handling of respiratory problems, including those of the comatose patient.

The third year is spent in the research laboratory and on surgical specialties, such as cardiovascular surgery and pediatric surgery. Departmental research projects will be open to his participation. These may either involve simple drug evaluation or be more complex, requiring the use of physiologic monitors or analytical methods. The services of a physical chemist and electronics engineer are available to him.

A special course in physical chemistry is presented on a weekly basis and there are two regular anesthesia meetings each week.

Department of Cardiovascular-Thoracic Surgery
Ormand C. Julian, M.D., Ph.D., Chairman

Amato, Joseph J., B.S., M.D. Adjunct Attending, PSLH; Instructor, RMC	Faber, L. Penfield, B.A., M.D. Senior Attending, PSLH; Associate Professor, RMC	Jensik, Robert J., B.S., M.S., M.D. Senior Attending, PSLH; Professor, RMC	Lopez-Belio, Mariano, M.D. Associate Attending, PSLH; Associate Professor, RMC
Brown, Charles M., B.A., M.D. Adjunct Attending, PSLH; Instructor, RMC	Goldin, Marshall D., M.D. Assistant Attending, PSLH; Assistant Professor, RMC	Julian, Ormand C., B.S., M.D., Ph.D. Senior Attending, PSLH; Professor, RMC	Miley, Robert W., M.D. Adjunct Attending, PSLH; Instructor, RMC
deTakats, Geza, B.A., M.S., M.D. Consulting, PSLH; Emeritus Professor, RMC	Hunter, James A., B.S., M.D. Senior Attending, PSLH; Professor, RMC	Lal, Raj Behari, B.S.C., M.B.B.S., M.S. Adjunct Attending, PSLH; Instructor, RMC	Milloy, Frank J., M.D., M.S. Associate Attending, PSLH; Associate Professor, RMC
Dye, William S., Jr., B.S., M.D. Senior Attending, PSLH; Professor, RMC	Javid, Hushang, B.S., M.S., M.D., Ph.D. Senior Attending, PSLH; Professor, RMC	Langston, Hiram T., B.A., M.D., M.S. Consulting, PSHL; Visiting Professor, RMC	Monson, David O., B.A., M.D. Adjunct Attending, PSLH; Instructor, RMC

The Department consists of two sections having separate patient care functions but a strong combination of purpose in the training program. General surgical residents are given opportunities in depth in both areas on their assignment to these clinical services.

Senior responsibilities are assumed by the special residents in the department. Completion of an approved general surgical residency is a prerequisite for entering this program. Application should be made not less than 18 months prior to the desired starting date. Two appointments are awarded each year, one of which may be for January 1st as an alternate to the more common date of July 1st. The program leads to eligibility for examination by the Board of Thoracic Surgery.

The duration of training varies from 24 to 36 months. The most common duration is 30 months. Residents who spend the minimum time receive one year clinical training in each section. Ordinarily, the additional 6-12 months are spent in the cardio-respiratory laboratory of the Division of Medicine, the intensive therapy unit of the Division of Surgery, in cardiovascular surgical research in various combinations, or in the Department of Diagnostic Radiology.

Many residents begin the program in the cardiac catheterization and pulmonary function laboratories. Here the fundamentals of cardiac catheterization and angiocardiology are stressed. Increasing responsibility in the performance of the various procedures is assigned appropriately as experience progresses. At the completion of this rotation the resident is able to judge which diagnostic procedure is necessary, to perform it with assistance, and then interpret the results. During this period, time is made available to learn electrocardiographic diagnosis, the essentials of electric cardioversion and the operation of standard electronic monitoring equipment. Time also is allotted to the study and review of respiratory physiology through laboratory and clinical pulmonary function studies. Bedside teaching of cardiac diagnosis in adults and children is conducted during the daily ward rounds. The candidate has assigned to him certain patients selected for study by the director of the laboratory. He is then responsible for a pre-procedural work-up and presentation on such patients, and follows them throughout their hospital course. This rotation is usually two months in duration.

The first clinical year is spent in the Section of

Thoracic Surgery. This is exclusively pulmonary and esophageal surgery. In addition to daily rounds and operative surgery, there is a weekly formal Cardiovascular-Thoracic Conference where cases of interest are presented by several participating institutions across the city and suburban area. Time is allotted for the teaching of diagnostic thoracic radiology and pathology by informal instruction and regularly scheduled conferences.

The final rotation consists of twelve months on the Cardiovascular Surgical Services. The resident is "Junior" for the first six months during which time the majority of his operative experience is in arterial surgery, the surgery of portal hypertension, and closed cardiac surgery. The final six-month period as "Senior" provides for training in and performance of open heart surgery with a continued effort in peripheral vascular surgery.

The two sections operate in three rooms five days each week for scheduled cases. Five to seven open heart procedures are pre-scheduled weekly. Abdominal aneurysmectomy, aortic bifurcation grafting, carotid endarterectomy, femoro-popliteal bypass and endarterectomy make almost daily appearances on the schedule. Pacemaker implantation, surgery for portal and renal hypertension, ductus and coarctation repair and closed mitral commissurotomy occur regularly. Frequent pulmonary and esophageal procedures include pneumonectomy, segmentectomy, decortication, lobectomy, esophago-gastric resection and reconstruction and endoscopic procedures of all types. Total cases average around 125 per month with the resident staff performing all types. During the training period each candidate moves through the operating team from 2nd to 1st assistant, finally assuming operative responsibility as various techniques are mastered. A large volume of diagnostic angiography performed by the house staff insures mastery of these techniques and proper interpretation of the resulting films. Daily rounds are conducted by attending men and provide excellent training in bedside clinical diagnosis. The "Senior" assumes responsibility for the weekly Cardiovascular-Thoracic Conference, for the precise tabulation of monthly morbidity and mortality, and the daily surgical scheduling and the disposition of service personnel for routine activities. Commensurate with ability, he assumes full responsibility for the preoperative workup and postoperative care of all patients and for the proper administration of the service.

Department of General Surgery

Harry W. Southwick, M.D., Chairman

Apter, Julia T. , B.A., M.D., M.S., Ph.D. Senior Attending, PSLH; Professor, RMC	Goodwin, Charles D. , B.S., M.D. Adjunct Attending, PSLH; Instructor, RMC	Lyon, Will F. , M.D. Emeritus, PSLH; Emeritus Professor, RMC	Roseman, David L. , B.S., M.S., M.D. Assistant Attending, PSLH; Associate Professor, RMC
Boswick, John A., Jr. , B.A., M.S., M.D. Senior Attending, PSLH; Visiting Professor, RMC	Guynn, Vernon L. , B.S., M.D. Associate Attending, PSLH; Assistant Professor, RMC	McDonald, Gerald , M.D. Assistant Attending, PSLH; Assistant Professor, RMC	Schmidtke, Wendell H. , B.S., M.D., M.S. Assistant Attending, PSLH; Visiting Assistant Professor, RMC
Caldwell, Richard G. , A.B., M.D., M.S. Associate Attending, PSLH; Assistant Professor, RMC	Habegger, Loren J. , B.E., M.E., Ph.D.E. Instructor, RMC	McDonald, Owen G. , B.S., M.D. Associate Attending, PSLH; Assistant Professor, RMC	Seale, Raymond , B.S., M.A., Ph.D. Associate Professor, RMC
Cole, Warren H. , M.D. Emeritus, PSLH; Emeritus Professor, RMC	Haley, Ronald G. , B.S., M.S., M.D. Assistant Attending, PSLH; Assistant Professor, RMC	McMillan, Foster L. , B.S., M.D. Senior Attending, PSLH; Professor, RMC	Seetapun, Anun , M.D. Adjunct Attending, PSLH; Instructor, RMC
Davis, Carl B., Jr. , A.B., M.D. Associate Attending, PSLH; Associate Professor, RMC	Hanselman, Russell C. , A.B., M.D. Associate Attending, PSLH; Assistant Professor, RMC	Meyer, Harold I. , M.D. Emeritus, PSLH; Emeritus Professor, RMC	Shorey, William D. , A.B., M.D. Senior Attending, PSLH; Associate Professor, RMC
DePeyster, Frederic , B.A., M.D. Senior Attending, PSLH; Professor, RMC	Hart, William H. , B.A., M.D. Adjunct Attending, PSLH; Instructor, RMC	Nyhus, Lloyd M. , M.D. Consulting, PSLH; Visiting Professor, RMC	Southwick, Harry W. , A.B., M.D. Senior Attending, PSLH; Professor, RMC
Diffenbaugh, Willis G. , B.S. M.D. Senior Attending, PSLH; Associate Professor, RMC	Holmblad, Edward C. , M.D. Emeritus, PSLH; Emeritus Professor, RMC	Olwin, John H. , A.B., M.D. Senior Attending, PSLH; Professor, RMC	Straus, Albert , M.D. Instructor, RMC
Diggs, Arthur E. , B.A., M.D. Consulting, PSLH; Emeritus Associate Professor, RMC	Jamieson, Robert W. , P.H.B., M.S., M.D. Senior Attending, PSLH; Associate Professor, RMC	Overstreet, Robert J. , B.S., M.D., M.S. Associate Attending, PSLH; Assistant Professor, RMC	Straus, Francis H. , B.S., M.D. Consulting, PSLH; Emeritus Professor, RMC
Doolas, Alexander , M.D. Assistant Attending, PSLH; Assistant Professor, RMC	Jensen, J. M. L. , M.D. Emeritus, PSLH; Emeritus Professor, RMC	Paul, Harold A. , B.S., M.D. Associate Attending, PSLH; Associate Professor, RMC	Strohl, E. Lee , B.S., M.D., M.S. Senior Attending, PSLH; Professor, RMC
Economou, Steven G. , M.D. Senior Attending, PSLH; Professor, RMC	Johnson, Frank R. , S.B., M.D. Senior Attending, PSLH; Associate Professor, RMC (Pediatrics)	Poeppel, Roger B. , B.E., Ph.D. Instructor, RMC	Sulieman, John S. D. , M.B.B.C. Assistant Attending, PSLH; Assistant Professor, RMC (Urology)
Fell, Egbert , M.D. Consulting, PSLH; Emeritus Professor, RMC	Kirkpatrick, James R. , B.S., M.D. Adjunct Attending, PSLH; Instructor, RMC	Puestow, Charles B. , M.D. Consulting, PSLH; Emeritus Professor, RMC	Wavak, Paul W. , M.D. Adjunct Attending, PSLH; Instructor, RMC
Gilchrist, R. Kennedy , B.S., M.D. Senior Attending, PSLH; Professor, RMC	Lawton, Stanley , M.D. Emeritus, PSLH; Emeritus Professor, RMC	Radway, Paul R. , B.S., M.D. Adjunct Attending, PSLH; Instructor, RMC	Witkowski, Leon J. , B.S., M.S., M.D. Senior Attending, PSLH; Professor, RMC
		Rasmussen, Alfred , M.D. Emeritus, PSLH; Emeritus Professor, RMC	
		Reynolds, John T. , B.S., M.S., M.D. Senior Attending, PSLH; Professor, RMC	

The Office of Surgical Sciences and Services has maintained that optimal surgical care is best rendered to patients by a surgical staff that is well balanced in all of its various departments. Equally important, a staff so composed provides a richer opportunity for the trainee, whether intern, resident or fellow, to obtain an orderly and well rounded education, both in basic surgery and in the disciplines of specialty surgery. In this atmosphere, the Department of General Surgery accepts the broadest responsibility for surgical training.

After the first year of the residency, in essence after two years of surgical training, the program is "horizontal" rather than "pyramidal" in structure, so that applicants are chosen with the intent of having them complete their training at this hospital, either in general surgery, or in one of the surgical

specialties.

First Year Residency

Twelve residents are ordinarily appointed for the first year. The majority generally wishes to continue training in a specialty other than general surgery after completion of this first residency year. As the first year is devoted to the teaching of basic surgery, however, all residents are assigned to a similar rotation of services with expectation of similar performance. Generally, six months is spent in general surgery and six months on specialty services with a number of varied opportunities for such rotations. Those individuals not continuing in general surgery usually spend at least a two month period in their chosen specialty department or section, so that the resident may once again confirm his interest in proceeding

with additional training in the particular area. Other assignments are germane to his future needs.

The first year residency, in a way, is the second half of the basic core surgical program, reemphasizing the areas of greatest interest or need for the particular individual involved. During this year, the resident, unlike during the internship year, spends two months in the emergency room, which is not possible until licensing by the State of Illinois.

The first year resident is buttressed on one side by the intern and the medical students on his service, whom he must begin to guide and teach, and on the other by the senior resident and attending surgeons to whom his progress is a primary responsibility. He performs surgery under the supervision of an attending surgeon or senior resident with staff rank, with equal emphasis on surgical principles and correct operative techniques. The variety and complexity of the operations he performs increases in line with his demonstrated ability. This first residency year is considered a highly significant one during which a strong basic foundation is laid for a rewarding continuation of residency training.

Second Year Residency

The assignments during the second year of the residency are more flexible than those during the internship or first year. Those residents who have any inclination to develop and explore a research project are strongly encouraged to do so. Those residents not wishing to spend time in the laboratory are reassigned to varying clinical services. It is felt that the entire year need not necessarily be spent in the research laboratory, if the background for the project is developed prior to devoting full time to the project. A variety of elective rotations are available for six months, or two three-month rotations, either within other departments within the institution or, occasionally, in other acceptable programs.

Exposure to a research experience at this stage fulfills several essential requisites to continued maturation in the science of surgery. The resident has already spent two clinical years, one as an intern—and one as a first year resident, and is in a position to have formulated questions to which the answers may lie in the laboratory. Designing and executing an experiment to pursue such problems rewards him with an ability to evaluate more intelligently the information thrust upon him in the surgical literature. This can result only in a better clinical surgeon. The research rotation also crystallizes in the mind of the resident the degree to which he may choose to include laboratory or clinical research in his career.

Each resident is given several options in the selection and execution of surgical experiments. He may choose to participate in an on-going project where he would be responsible for one facet of a broad subject. The resident may wish to work alone on a project of his own choosing, or, lacking an original

idea, to be assigned to a project by the department. It is mandatory during this year that the resident attend the weekly surgical research conference. These informal discussions of current projects are a means of providing broad guidance.

A five-year residency is available for those trainees who clearly wish to pursue an academic career. Following the laboratory year, the residents in this program return to the rotation for the additional year of clinical experience at the second year level.

Third Year Residency

The third year is one of full clinical activity with the resident assuming an increasing proportion of the responsibility for the management of the patients on the service to which he is assigned. Six months are spent in general surgery, and the remainder in rotations.

If the elective rotations have not been already consummated in the second year, opportunity is afforded to consider such rotations at this level. As was mentioned earlier, these rotations may take place either in the medical center or in affiliated or other hospitals approved by the chairman of the department.

A three-month rotation is available on the cardiovascular service. A large variety and number of cardiac and vascular operations are performed and the junior resident given his full share of responsibility in surgery.

Fourth Year Residency

The fourth year residents spend the entire year on general surgery with a series of rotations on the four general surgical services. They are charged with the ultimate responsibility for the proper functioning of the service. Thus they begin to develop the ability to delegate appropriate duties to their subordinates, while at the same time being fully knowledgeable of all matters pertaining to the care of the surgical patients.

Health Center cases are admitted to all of the General Surgery services. The senior resident operates on these patients under the direction of an Attending surgeon, either with his assistance or with the assistance of the junior residents on the service. All hospitalized Health Center surgical consultations are honored by General Surgery Service I and the overall supervision of these cases is maintained by the chairman of the department.

Emergency Health Center admissions are assigned to the service of the senior resident on call for that particular day and he is responsible for their care while hospitalized under the supervision of the Head of the service. One morning per week is devoted to the Health Center Surgery Clinic, where new patients as well as follow-up visits on previously hospitalized patients are obtained.

Section of Pediatric Surgery
Frank R. Johnson, M.D., Director

The care of infants, children and adolescents with congenital and acquired problems requiring surgical care has undergone great change in recent years. The rotation of surgical interns and residents through the Pediatric Surgical Service brings them into contact with these problems under supervision of an attending surgeon and association with attending pediatricians and house staff.

Rounds are made several times a week in the newborn and premature nursery where 3,200 deliveries yearly yield a steady flow of congenital problems amenable to surgical treatment. Daily rounds are made on pediatric surgical patients on the wards for infants and children and on the adolescent ward.

Outpatient clinics twice weekly with an average census of 20-30 patients each clinic day offer the staff ample opportunity to examine, diagnose and prepare patients for elective surgical care, and to follow patients treated in the emergency room on an ambula-

tory basis.

Two days a week are set aside for elective surgery where the intern has an opportunity to assist and to observe the surgical treatment as a member of the operating team. Often he is first assistant to the resident or attending surgeon and depending on his interest and ability he may operate with the assistance of the resident or attending surgeon.

The intern is primarily responsible for the pre and postoperative care of the patients on his service and under the guidance and supervision of his resident presents his patients on daily ward rounds to the attending surgeon for additional consultation.

Teaching responsibilities are also a part of the Intern's experience when students are assigned to the service.

The emergency room is a constant source of patients presenting problems resulting from burns, blunt and penetrating trauma as well as the acute abdominal problems of appendicitis, Meckel's diverticulitis, intussusception, and other acute pediatric surgical disorders.

Department of Neurological Surgery
Walter W. Whisler, M.D., Ph.D., Chairman

Norton, Thomas F., A.B. M.D. Assistant Attending, PSLH; Assistant Professor, RMC	Selby, Roy, B.S., M.D. Consulting, PSLH; Visiting Associate Professor, RMC	Voris, Harold C., M.D., Ph.D. Consulting, PSLH; Emeritus Professor, RMC	Whisler, Walter, M.D., Ph.D. Senior Attending, PSLH; Professor, RMC (Neurological Sciences)
Oldberg, Eric, B.S., M.D., Ph.D. Emeritus, PSLH; Emeritus Professor, RMC	Sugar, Oscar, M.D. Consulting, PSLH; Visiting Professor, RMC		

The Department of Neurological Surgery offers a five year post medical school training program with an optional year in research, approved by the American Board of Neurological Surgery. No internship is required but applicants with a prior straight surgical internship or equivalent may begin at the second year level.

During the first post medical school year, time is spent on rotation through several of the other surgical departments to develop a broad knowledge of the surgical arts and sciences.

The second year is spent in clinical neurosurgery with the emphasis placed on diagnosis and diagnostic neuroradiology. In the third year there is a six month rotation in neurology and six months in neuropathology. Following an optional research rotation, the last 24 months are in clinical neurosurgery. Rotations can often be modified to accommodate special interest. The clinical aspects of the program are organized around the principle of progressively graded responsibility with appropriate supervision.

The program is designed to present the basic neurological sciences as well as the practical aspects of neurosurgery. During the year, the resident will be able to attend neurology and neurosurgery grand rounds, brain cutting seminars, neurosurgical topic seminars, and the basic neuroscience course (neuroanatomy, neurophysiology, and neurochemistry).

Primary among the strengths of the Department of Neurosurgery is the broad variety of clinical material which is studied and managed and the utilization of all of the modern neurosurgical techniques available. Besides general cranial, spinal, and pediatric neurosurgery, many microsurgical and stereotaxic procedures are performed. An active program is also maintained for the medical treatment of malignant brain tumors. The research facilities in the department of neurosurgery include a tissue culture laboratory, several highly specialized neurochemistry laboratories, a general biochemistry laboratory, and a neurophysiology laboratory for stereotaxic and microsurgical work.

Department of Obstetrics and Gynecology

George D. Wilbanks, M.D., John M. Simpson

Chairman of Obstetrics and Gynecology

Archie, Julian T., B.A., M.D., M.P.H.
Assistant Attending, PSLH;
Assistant Professor, RMC
Baum, Hugo C., B.S., M.D.
Senior Attending, PSLH;
Associate Professor, RMC
Beebe, Robert A., B.S., M.D.
Senior Attending, PSLH;
Assistant Professor, RMC
Boysen, Harry, B.S., M.D.
Senior Attending, PSLH;
Professor, RMC
Donovan, William H., B.A., M.D.
Adjunct Attending, PSLH;
Instructor, RMC
Draa, Cecil C., B.S., M.D.
Senior Attending, PSLH;
Associate Professor, RMC
Finola, George C., B.A., M.D.
Consulting, PSLH;
Emeritus Professor, RMC
Geittmann, William F., B.A., M.D.
Senior Attending, PSLH;
Associate Professor, RMC
Gough, James A., M.D.
Emeritus, PSLH;
Emeritus Professor, RMC

Hendrickson, Frank R., B.A., M.D.
Senior Attending, PSLH;
Professor, RMC
(Therapeutic Radiology)
Jakubowski, Aleksander, M.D.
Adjunct Attending, PSLH;
Instructor, RMC
Klawans, Arthur, B.S., M.D.
Consulting, PSLH;
Professor, RMC
Lee, Alice W., M.D.
Adjunct Attending, PSLH;
Instructor, RMC
Long, John S., B.S., M.D.
Senior Attending, PSLH;
Assistant Professor, RMC
McCue, Stephen A., B.A., M.D.
Adjunct Attending, PSLH;
Instructor, RMC
Mengert, William F., M.D.
Emeritus, PSLH;
Emeritus Professor, RMC
Misenhimer, H. Robert, M.D.
Senior Attending, PSLH;
Associate Professor, RMC

Mohtasebie, Mohammad, M.D.
Adjunct Attending, PSLH;
Instructor, RMC
Nichols, Ervin E., M.D.
Consulting, PSLH;
Visiting Professor, RMC
Nielson, Paul E., B.A., M.S., M.D.
Senior Attending, PSLH;
Professor, RMC
(Psychiatry)
Northrop, Gretajo, B.S., M.S., Ph.D., M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC
(Internal Medicine)
Oberhelman, Robert H., B.S., M.D.
Adjunct Attending, PSLH;
Instructor, RMC
Olson, Robert P., A.B., M.S., M.D.
Associate Attending, PSLH;
Assistant Professor, RMC
Orban, Denes, M.D.
Senior Attending, PSLH;
Associate Professor, RMC
Prabhavathi, S., M.B.B.S.
Adjunct Attending, PSLH;
Instructor, RMC

Priest, Fred O., M.D.
Emeritus, PSLH;
Emeritus Professor, RMC
Rodriguez, Gabriel A., M.D.
Assistant Attending, PSLH;
Associate, RMC
Schewitz, Lionel J., M.B.C.H.
Associate Attending, PSLH;
Assistant Professor, RMC
Sheikh, Ghulam N., M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC
Truchly, Vasil, M.D.
Senior Attending, PSLH;
Assistant Professor, RMC
Tryer, Louise B., B.S., M.D.
Consulting, PSLH; Visiting
Associate Professor, RMC
Wilbanks, George, A.B., M.D.
Senior Attending, PSLH;
Professor, RMC
Wolff, John R., M.S., M.D.
Senior Attending, PSLH;
Professor, RMC
(Psychiatry)
Wynn, Ralph, M.D.
Consulting, PSLH;
Emeritus Professor, RMC

The Department of Obstetrics and Gynecology offers a four year post-medical school training program, approved by the American Board of Obstetrics and Gynecology. Objectives of this program are to offer an integrated program of total post-medical school training which emphasizes comprehensive experience in all phases of obstetrics and gynecology. The program also combines experience in internal medicine, neonatology, and obstetric and gynecologic pathology to broaden the physician's basic medical experience in preparation for the practice of general obstetrics and gynecology, for further subspecialty training, or for careers in academic obstetrics and gynecology. Elective time may be spent in clinical rotations or basic research programs in the Department of Obstetrics and Gynecology or in related specialties, depending on the interests of the individual resident. There are four positions at each year of the program for a total of 16 residents. No internship is required in order to begin the program, but those with prior internship may begin at the second year if positions are available.

All members of the attending staff are certified by the American Board of Obstetrics and Gynecology. They are actively engaged in the teaching programs for house staff and medical students. Residents at all levels are involved in student teaching activities with Rush Medical College.

All patients admitted to the Medical Center are

utilized in the training of house staff and students. Approximately 3,000 obstetric patients are delivered in the hospital each year; sixty percent of these are Health Center patients whose definitive care is given by the members of the house staff under the supervision of the attending staff. More than 1,600 surgical procedures are performed by the department each year; about one-third of this total are Health Center patients on whom surgery is performed by the resident staff. Since this department historically has been noted for pioneering in vaginal surgery, special emphasis is placed upon this area.

The residents are organized into two practice groups. Patients are assigned to each group and are seen on appointment by members of that group. This not only assures a continuity of patient care, but allows the physician to begin training early for office practice. The senior residents of each group are given maximum responsibility for patient care with attending physicians readily available for consultation and instruction. Teaching conferences are clinically oriented, with maximum resident participation.

The department has staff representing the major obstetric and gynecologic subspecialties: perinatal biology, endocrinology, oncology, community obstetrics and family planning, and psychosomatic obstetrics and gynecology. Each subspecialty is involved in interdisciplinary associations to broaden

its patient care, teaching, and research objectives (e.g., the endocrinology service involves ob-gyn, medical, and pediatric endocrinologists). Yet, there is maximum inter-department exchange and cooperation, (i.e., between perinatal biology, endocrinology, and oncology, who use the same rhesus monkey colony as experimental models). Faculty with these diverse backgrounds, yet with a common interest in clinical obstetrics and gynecology, offers the resident depth in his basic training, and opportunity for specialized consultation and learning. Post-residency fellowships are being developed in each of the subspecialties in preparation for the future subspecialty board requirements of the American Board of Obstetrics and Gynecology.

Section of Perinatal Biology

H. Robert Misenhimer, M.D., Director

More than 3,000 obstetric patients give birth to their infants at the Rush-Presbyterian-St. Luke's Medical Center each year. Two-thirds of these are referred from the Health Center of the Hospital and from other prenatal clinics in the city and are cared for by the staff of 16 residents under the guidance of 19 attending obstetrician-gynecologists. All the attending staff participate actively in the resident and medical student teaching program as well as ensuring the continuum of consultative and supervisory services for the residents.

The activities of both the out-patient and the in-patient services are geared to providing the highest quality of total care that is available. Whenever it is appropriate to do so, patients who are believed to be at increased risk of an unsuccessful obstetric outcome are seen in specialty clinics where consultative expertise is available to the patient in a multi-discipline setting that includes the obstetrician. Liberal use is made of similar in-patient services for those patients who cannot be managed adequately on an out-patient basis.

Multiple weekly conferences and seminars under the direction and supervision of the attending staff provide ample opportunity to the resident staff and to the medical students to explore and discuss the clinical problems which are encountered as well as to learn or review the basic concepts of perinatal biology.

Additionally, the resident staff has the opportunity for in-depth studies of specific problems of obstetrics in the Perinatal Biology Laboratory (formerly a division of the Department of Embryology of the Carnegie Institution of Washington). This laboratory is dedicated to the investigation of maternal and fetal physiologic and pathologic processes and utilizes the rhesus monkey as the experimental model.

Section of Gynecologic Oncology

Denes Orban, M.D., Director

Gynecologic Oncology is an integral part of the

combined oncology services, involving radiation therapy, medical oncology, surgical oncology, and pathology. There are weekly tumor conferences and tumor clinics, along with day-to-day management of patients with gynecologic malignancies by the resident staff. Over 150 patients with various type of gynecologic malignancies are treated each year. All residents are involved in basic cancer patient care and may elect to pursue a clinical or basic project during their training period.

Several clinical research projects are in progress within the division and in cooperation with the nation-wide Gynecologic Oncology Group, involving surgery, radiation therapy, or chemotherapy, or various combinations of two or more types of therapy. Evaluation of early cervical neoplastic lesions is made in a special clinic utilizing cytology, colposcopy, and colpomicroscopy. More basic studies are being conducted in the oncology laboratories of the department concerning *in vitro* carcinogenesis and cell differentiation.

The emphasis of this subspecialty is to train the resident and student to be adept at managing clinical problems in the diagnosis, therapy and prevention of gynecologic malignancies. Intelligent management of clinical problems comes from a thorough understanding of the pathogenesis of the disease. The staff's interest is clinical, and basic research encourages a scientific approach to solving clinical problems.

Section of Gynecologic Endocrinology

Vasil Truchly, M.D.

Gretajo Northrop, M.D.

This section of the Department of Obstetrics and Gynecology is being developed and will function as follows:

1. Laboratories that are able to assay protein and steroid hormone levels in excretory, secretory or tissue amounts will be established, some in conjunction with the Medical Division Endocrinology Section Laboratories now in being. Clinical and research application of current methods of analysis will be used, for example, saturation analysis (competitive protein binding), radioimmunoassay, gas-liquid chromatography, chemical analyses, etc.
2. Clinics and seminars devoted to reproductive and gynecologic endocrine problems will be held in conjunction with other divisions of the Hospital and Medical School sharing mutual interest.
3. The practical value and intellectual stimulation that evolves from these efforts will be available for medical students, residents, fellows and staff at each level of development. The learning stimulus and mutually beneficial arrangement of this total program should aid the continued progress of both individuals and institution.
4. Specific programs for residents and fellows will

be arranged under the guidance of the Obstetric and Gynecologic Endocrine faculty.

Section of Community Obstetrics and Family Planning

Julian T. Archie, M.D., Director

Community Obstetrics in Obstetrics and Gynecology is closely allied with the Department of Community Health of the Division of Medicine and the Mile Square Neighborhood Health Center. One of the aims of Rush-Presbyterian-St. Luke's Medical Center is to innovate methods for the delivery of health care to all segments of the population. Residents and students are involved in the family planning clinics. In the relationship with the Mile Square Neighborhood Health Center, an OEO funded project, and opportunity is offered to become acquainted with the health problems of the indigent in the ghetto. This can serve to involve those interested in the sociologic and ethnic ramification that may influence the delivery of health care to such a group. Continuous evaluation of the impact of these efforts as they relate to improved maternal and infant health, cancer screening, and other epidemiologic aspects of the community is in progress. A resident may elect to spend time in any of these projects.

Section of Psychosomatic Obstetrics and Gynecology

John R. Wolff, M.D., Director

Psychosomatic Obstetrics and Gynecology in this department has been established to organize the teaching of practical psychological interviewing and counseling principles and techniques to the staff and to assist in patient care and research in all areas of the Obstetrics and Gynecology Department and other specialties. A productive liaison exists with the Department of Psychiatry. Combined appointments have produced an interdisciplinary team of clinicians and a research group. Consultation concerning patients with psychosomatic problems and/or unusual emotional difficulties is available to the staff at all times.

Department of Ophthalmology

William F. Hughes, M.D., Chairman

Opportunities are open to first year residents to acquaint them with the effect of the emotions on reproductive and gynecic physiology as well as the importance of social and economic factors in physical and mental health.

During the second and third year, each resident, serving in rotation, is responsible for preparing interdisciplinary conferences. He selects patients, interviews them and leads in the discussion relating to psychosomatic disorders, patient care problems, and the moral, ethical and social aspects specific to obstetrics and gynecology.

The fourth year resident is encouraged to learn the techniques of psychotherapy with patients seen in the Gynecologic-Psychiatric Clinic. Supervision in the management of such patients is on a continuing basis. In addition he may elect to devote one or more months in a more detailed and special instructional program. A post-residency fellowship year is in the progress of organization, leading to certification in this subspecialty.

Postgraduate seminars for practicing obstetricians-gynecologists who recognize their personal need for further understanding and knowledge in the field are to be offered.

Medical students participate actively in these programs during their course in basic obstetrics and gynecology. Elective courses will be offered to those who wish to pursue psychosomatic obstetrics and gynecology in more depth.

Research has focused on patient care and specific patient problems. This will be expanded into areas relating to basic physiology integrated with the other sections within the department. Resident participation is encouraged. Trainees from other areas within the hospital and from other institutions will rotate through this service.

The department is devoted to the principle of good patient care and to developing new systems for delivering this care to the community. Psychosomatic obstetrics and gynecology adheres to this by stimulating trainees to develop their own special interests and by providing opportunities for enhancing their understanding and expertise.

Brown, David V. L., B.M., M.D.
Associate Attending, PSLH;
Assistant Professor, RMC
Deutsch, Emil, M.D.
Emeritus, PSLH;
Emeritus Professor, RMC
Deutsch, William E., B.S., M.D.
Senior Attending, PSLH;
Associate Professor, RMC

Ey, Richard C., B.S., M.D.
Associate Attending, PSLH;
Assistant Professor, RMC
Fowler, Earle B., M.D.
Emeritus, PSLH;
Emeritus Professor, RMC
Gamble, Richard C., M.D.
Emeritus, PSLH;
Emeritus Professor, RMC

Haas, Joseph S., B.A., M.S.
Senior Attending, PSLH;
Professor, RMC
Hughes, William F., A.B., M.D.
Senior Attending, PSLH;
Professor, RMC
Leech, Vernon M., M.D.
Emeritus, PSLH;
Emeritus Professor, RMC

Levett, Jeffrey, B.S., Ph.D.
Assistant Professor, RMC
(Biomedical Engineering)
Moncreiff, William, M.D.
Emeritus, PSLH; Emeritus
Professor, RMC
Nowicki, Norbert J., B.S., M.D.
Associate Attending, PSLH;
Instructor, RMC

Pushkin, Edward A., B.S., M.D.
Associate Attending, PSLH;
Associate Professor, RMC

Radvilla, Izolda M., M.D.
Adjunct Attending, PSLH;
Visiting Instructor, RMC

Spiro, Barbara, M.D.
Assistant Attending, PSLH;
Associate, RMC

The residency training program in ophthalmology is approved by the Residency Review Committee of the American Medical Association and the American Board of Ophthalmology. Preference is given those individuals who have completed a one year general internship.

The ophthalmology residency is a three year program, two years of which are spent at the Presbyterian-St. Luke's Hospital, and one year which includes a full-time post-graduate course in ophthalmology elsewhere and an exchange residency with the University of Illinois Eye & Ear Infirmary. The formal post-graduate course of three to five months can be taken anytime during the first two years at any recognized institution or the Lancaster Course; tuition fees, allowance for books, and regular residence stipend are provided by the Medical Center. Some individuals take an additional six months on a research fellowship.

The teaching program is built around the initial examination, treatment and followup of patients from the beginning of training rather than a pyramidal system of graduated responsibilities ending in a final period of surgery. Health Center patients are the direct responsibility of the residents under close supervision of the attending staff, and there are approximately 5000 outpatient visits per year. The rate of development of surgical technic by the resident depends on his level of competence. Extraocular procedures are performed soon after beginning the residency and intraocular procedures after 6-12

months. The average resident performs approximately 150-200 major procedures during his three years of training. Other responsibilities of the resident include consultations with other departments and the admission examination of private patients with active participation in any surgical procedure. Residents are assigned for periods of six months on a rotating basis to groups of two or three attending ophthalmologists in order to provide better rapport and followup of patients. The chairman of the department is geographically full-time.

Formal consultation rounds on Health Center patients are held once a week for three hours. A breakfast conference of two hours is held once a week, at which time a variety of subjects are discussed, e.g., journals, reports by staff or residents who have attended a scientific meeting elsewhere, and systematic coverage of important subjects or the Home Study Course. Regular and special conferences at the University of Illinois Eye & Ear Infirmary are available. Grand Rounds at noon in the Departments of Neurology, Pediatrics, Surgery, and Medicine are attended if the subject is of ophthalmologic interest. Surgical specimens prepared in the Eye Pathology Laboratory are reviewed by the resident and discussed with attending staff. Each resident is urged to participate in either a clinical or laboratory research project.

Appointments are usually made at least by the Fall preceding the beginning of residency July 1st. Resident stipend is \$10,344 for the first year, \$10,939 for the second year, and \$11,646 for the third year.

Department of Orthopedic Surgery

Jorge O. Galante, M.D., Chairman

DeWald, Ronald L., B.S., M.D.
Associate Attending, PSLH;
Assistant Professor, RMC
Galante, Jorge O., B.A., M.D.
Senior Attending, PSLH;
Professor, RMC
Hark, Fred W., M.D.
Emeritus, PSLH;
Emeritus Professor, RMC

Hark, William A., B.A., M.D.
Associate Attending, PSLH;
Assistant Professor, RMC
Heck, Charles V., B.S., M.D.
Consulting, PSLH;
Professor, RMC
Hejna, William F., B.A., M.D.
Senior Attending, PSLH;
Professor and Associate Dean, RMC

Howard, Francis M., B.A., M.D.
Associate Attending, PSLH;
Assistant Professor, RMC
Lambert, Claude N., A.B., M.S., M.D.
Senior Attending, PSLH;
Professor, RMC

Ray, Robert D., B.A., M.A., Ph.D., M.D.
Senior Attending, PSLH;
Professor, RMC
Rostoker, William, B.S., M.S., Ph.D.
Visiting Professor, RMC
Shapiro, Fred, B.S., M.D.
Senior Attending, PSLH;
Associate Professor, RMC

A four-year approved residency program in orthopedics is offered by Rush Medical College.

Prerequisite for appointment is one year of internship, preference being given to individuals who elect the internship at Rush-Presbyterian-St. Luke's Medical Center. The first year is spent in the orthopedics service at Presbyterian-St. Luke's Hospital. An elective general surgery rotation is available at this level.

During the second year, residents may elect to

participate in the research programs offered in the Orthopedic Research Laboratories at Presbyterian-St. Luke's Hospital, rotating with the Neurosurgery or Plastic Surgery Departments or in the orthopedic service.

The third year includes an optional trauma rotation in one of the affiliated network hospitals.

Six months of the senior year are spent in the pediatric-orthopedic service at Cook County Hospital and

six months as senior resident at Presbyterian-St. Luke's Hospital. Considerable opportunities for independent management of patients in both services are offered at this level of training. For those interested in developing skills in a particular problem, an additional fifth year can be arranged on an individual basis in institutions in this country or abroad.

An active Orthopedic Surgery Department functions at Presbyterian-St. Luke's Hospital. All of the patients admitted to the service are available for teaching. The clinical experience encountered encompass a broad scope of musculoskeletal problems including spinal diseases, modern hip and knee surgery, hand surgery, surgery of arthritis, amputations, trauma, and pediatric orthopedics. In addition to the private outpatient offices located in the professional building, four active teaching clinics are conducted.

A pediatric orthopedic rotation is conducted at Cook County Hospital. Close supervision is provided by a staff member of the Presbyterian-St. Luke's orthopedic department.

The research facilities at the Presbyterian-St. Luke's Hospital include tissue culture laboratories, laboratory for heart tissue histopathology, biochemistry laboratories, radioisotope facilities, and a labora-

tory for bioengineering studies. Two major research programs are conducted in these facilities. The biochemistry program includes studies of the role of enzymes in bone formation and resorption, metabolic studies of bone and cartilage, and studies of bone immunology. A bioengineering program is conducted in conjunction with the Department of Materials Engineering at the University of Illinois Circle Campus. Basic studies on total hip and total knee joint replacement and in the mechanics of idiopathic scoliosis constitutes the core of this program.

A seminar program in basic sciences is conducted. Cadaver sessions and special presentations on anatomy are scheduled regularly and supervised by members of the staff. A regular review of the histopathology of the muscular skeletal system is conducted and teaching-oriented seminars are held weekly. Other conferences include journal club, trauma conferences, basic and clinical research conferences.

The residency program is organized around the principle of progressively increasing responsibility, with adequate supervision. Inquiries concerning the program should be directed to the chairman of the department.

Department of Otolaryngology and Bronchoesophagology

Stanton A. Friedberg, M.D., Chairman

Aimi, Kenji, M.D.
Associate Attending, PSLH;
Associate Professor, RMC
Andrews, Albert H., B.S., M.S., M.D.
Senior Attending, PSLH;
Professor, RMC
Bray, Thomas E., D.M.D.
Adjunct Attending, PSLH;
Instructor, RMC
Buckingham, Richard A., M.D.
Lecturer, PSLH;
Lecturer, RMC
Caldarelli, David D., M.S., M.D.
Assistant Attending, PSLH;
Instructor, RMC
Conner, George H., B.A., M.S., M.D.
Associate Attending, PSLH;
Associate Professor, RMC
Coombs, Arthur J., M.D.
Emeritus, PSLH;
Emeritus Professor, RMC

Ditmer, Cedric, D.D.S.
Emeritus, PSLH;
Emeritus Professor, RMC
Douglas, Bruce L., A.B., D.D.S., M.A., M.P.H.
Senior Attending, PSLH;
Professor, RMC
Friedberg, Stanton A., A.B., M.D.
Senior Attending, PSLH;
Professor, RMC
Gladfelter, Ira A., Jr., D.D.S.
Adjunct Attending, PSLH;
Instructor, RMC
Hanck, John J., B.S., D.D.S.
Adjunct Attending, PSLH;
Instructor, RMC
Holinger, Paul H., B.S., M.S., M.D.
Senior Attending, PSLH;
Professor, RMC
Holmes, William H., D.D.S.
Senior Attending, PSLH;
Associate Professor, RMC

Kelleher, Leon R., B.S., D.D.S.
Adjunct Attending, PSLH;
Instructor, RMC
Lederer, Francis, M.D.
Emeritus, PSLH;
Emeritus Professor, RMC
Pirok, Darryl J., B.A., M.S., D.D.S.
Associate Attending, PSLH;
Assistant Professor, RMC
Pirok, Ronald, B.D.S., D.D.S.
Adjunct Attending, PSLH;
Instructor, RMC
(Diagnostic Radiology)
Ratko, Arthur L., M.D.
Associate Attending, PSLH;
Assistant Professor, RMC
Razim, Edward A., B.S., M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC
Schacht, Dean, D.D.S.
Adjunct Attending, PSLH;
Instructor, RMC

Schild, Joyce A., B.S., M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC
Schultz, Louis W., M.D., D.D.S.
Consulting, PSLH;
Emeritus Professor, RMC
Sciarretta, S. A., M.D.
Emeritus, PSLH;
Emeritus Professor, RMC
Shearon, Kenneth, D.D.S.
Consulting, PSLH;
Instructor, RMC
Theobald, Walter H., M.D.
Emeritus, PSLH;
Emeritus Professor, RMC
Wallner, Linden J., B.S., M.D.
Senior Attending, PSLH;
Professor, RMC
Wolfe, Virginia I., Ph.D.
Associate Attending, PSLH;
Associate, RMC

A recently-approved independent residency program in otolaryngology provides for three residents, one in each year of training. In addition there are assigned to the service each month two to three house officers not in the otolaryngology program.

Hospital admissions to this service average approximately 1,000 patients annually, and encompass a great variety of clinical conditions. The numerous requests for consultations from other services provide additional exposure to diverse medical and surgical problems. The average daily census on the service is 25 patients.

The out-patient clinic in otolaryngology is held each weekday and averages approximately 5,000 patients during the year. Both adult and pediatric beds are available for hospitalization of Health Center patients. The residents work closely with three geographically full time department members and the seven-member voluntary attending staff.

Emphasis in both hospital and clinic areas is upon supervised instruction and graded responsibility for patient care. The residents prepare presentations for hospital seminars and for the departmental conferences. Residents also participate in the instruction of medical students, nurses, and technicians. Teaching rounds are held daily from 4:00 p.m. to 5:00 p.m. Surgical pathological material is reviewed in bi-weekly conferences. X-ray and tumor conferences, medical, pediatric, and surgical grand rounds are significant events in the weekly hospital teaching exercises. Surgical anatomy for the residents is supervised by the attending staff. A recently organized combined otolaryngology and head and neck tumor service has provided a new dimension of interest.

Section of Communicative Disorders

Virginia I. Wolfe, Ph.D.

The Communicative Disorders Section provides opportunity for the study of complex otologic problems as well as all manner of voice disorders. Rehabilitation of laryngectomized patients is an important and busy aspect of the activity in this section.

Section of Dental and Oral Surgery

Bruce L. Douglas, D.D.S., Director

Cedric Ditmer, D.D.S.

Ira A. Gladfelter, Jr., D.D.S.

John J. Hanck, D.D.S.

William H. Holmes, D.D.S.

Leon R. Kelleher, D.D.S.

Darryl J. Pirok, D.D.S.

Dean Schacht, D.D.S.

Louis W. Schultz, M.D., D.D.S.

Kenneth Shearon, D.D.S.

The Section of Dental and Oral Surgery includes four rotating dental internships, all approved by the Coun-

cil on Dental Education of the American Dental Association. The training program is conducted in collaboration with Roosevelt Memorial Hospital. It provides training in all aspects of dental practice within a group practice setting that relate directly or indirectly to the hospital. The intern, during at least half his training year, is assigned to the group and serves as a member of the group; emphasis is placed on assisting him to understanding the workings of a hospital-affiliated group dental practice in which there are constant interrelationships with physicians in various medical specialties. There is some degree of flexibility in the training program, which can vary to some degree according to the individual intern's interests. There is a concentrated three or four month program in anesthesiology, pain control, and intravenous sedation. Constant emphasis is placed on the medical aspects of dental practice and opportunities to learn the techniques of treating the dental problems of the handicapped, the aged, and the chronically ill. Each dental intern rotates through Roosevelt Memorial Hospital (also accredited by the A.D.A.), which is a small private hospital that typifies a private practice arrangement that a general practitioner would be inclined to enter. Each intern receives adequate experience in all aspects of oral surgery that might be encountered in the practice of well-trained general practitioner. A significant amount of major oral surgery is done in the program, also.

Interns interested in community dentistry are given opportunities to participate in hospital-oriented out-patient programs. The program is also affiliated with a nursing home, so that the intern acquires experience in treating bedbound patients away from the hospital environment.

The ultimate objectives of the program are to help the future general practitioner to function effectively in a total health care environment, with the emphasis on the dental and medical teams.

Many of the advantages of related hospital departments are available to the intern during his training, including operating room and out-patient experience with general anesthesia, medical and other departmental ward rounds, clinical pathological and tumor conferences, and the care of pediatric and obstetric patients in a preventive dental capacity.

The dental staff includes representation from all dental specialty areas and dental hygiene. There is an extensive dental assistant training program. The dental program is conducted in a clinical facility 8,000 square feet in size, which includes sixteen dental chairs, an elaborate dental radiology department, a large dental laboratory, recovery rooms, consultation rooms, and a large conference room for meetings and training sessions.

Department of Pathology

George M. Hass, M.D., The Harriet Blair Borland
Chairman of Pathology

Ayer, John P., A.B., M.S., M.D.
Senior Attending, PSLH;
Professor, RMC
Clasen, Raymond A., B.S., M.D.
Senior Attending, PSLH;
Associate Professor, RMC

Coogan, Philip S., M.D.
Associate Attending, PSLH;
Assistant Professor, RMC
Dainauskas, John R., M.D.
Associate Attending, PSLH;
Assistant Professor, RMC
Eisenstein, Reuben, B.S., M.D.
Senior Attending, PSLH;
Professor, RMC

Hass, George M., B.S., M.D.
Senior Attending, PSLH;
Professor, RMC
Lee, Robert E. Jr., B.S., M.S., Ph.D., M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC

Miller, Alexander W., M.D.
Associate Attending, PSLH;
Assistant Professor, RMC
Pellettiere, Edmund V., B.A., M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC

The principle upon which this program is based is to offer simultaneous progressive training in service functions, research and teaching. There are three ideas behind this type of a program. The first idea is that continuous divided attention to several subjects over a long period of time is preferable to concentrated attention to each subject in sequence over short periods of time. The second idea is that the program offers to the first year trainee or resident multiple choices as to how to use his time. The third idea is that the long period of continuous exposure to multiple subjects, beginning with the first day of training, will lead the trainee or resident more quickly to a recognition of his interests as well as develop his capacity for interpretation of diverse aspects of laboratory operations in daily hospital life.

Clinico-Basic Science Seminar Program

(Current case analyses)

1. Biochemistry Seminar (alternate weeks)
2. Tumor Clinic—Surgical Pathology (weekly)
3. Pathology Staff Conference (weekly)
4. Hematology Conference (weekly)
5. Neuropathology Seminar (weekly)
6. Microbiology Seminar (alternate weeks)
7. Research Seminar (weekly)
8. Histopathology Conference (weekly)
9. Autopsy Pathology Conference (weekly)
10. Surgical Pathology Conference (weekly)
11. Cytopathology Conference (weekly)
12. Liver Conference (weekly)
13. Renal Conference (weekly)
14. Clinical Pathology Conference (weekly)

First Year Trainee Program In Pathology

In July 1970, a first year post-doctoral trainee (M.D.) program in Pathology was initiated. Authorization was given for two trainees. The program, designated to replace our former straight internship, is as follows:

1. The first 6 months are spent in the Department of Pathology as an indoctrination in gross and microscopic pathologic anatomy. During this period the trainee may select a research subject and may begin investigative work under supervision of the attending staff.

2. The next 3 months are spent in the Department of Microbiology with part-time continuation of activity in his selected research field and in gross and microscopic pathologic anatomy. During this period he is assigned to microbiology under the direction of Dr. Friedrich Deinhardt and becomes acquainted with routine service procedures and their diagnostic implications.

3. The final 3 months are spent in the Department of Biochemistry. The program here is much the same as the one outlined for microbiology and is designed to acquaint the trainee with the technical procedures used in the service laboratories in clinical chemistry under the direction of Dr. Howard Sky-Peck.

4. The trainee during the entire 12-month period attends seminars and conferences outlined above. These involve case-oriented exercises designed to correlate the course of human disease with laboratory findings.

5. The foregoing year of post-doctoral training is equivalent to one year of resident training for Board Certification.

Six-Year Resident Training Program In Pathology

First Year of Residency

1. In the event that the first-year resident in pathology has had a previous year as a trainee in pathology, the program outlined in the succeeding years is essentially as given with the understanding that the trainee who has had a traineeship in pathology is in a different state of training than a first-year resident who has had another type of internship. In general, however, the type of traineeship preceding resident training is a matter of personal preference and has no particular bearing upon the resident program.

2. Emphasis is placed on gross and microscopic pathologic anatomy.

3. A research subject is occasionally selected by the resident, unless an assigned subject is desired. As a rule, the resident is guided by the attending staff if he lacks experience in research, but research training is a purely elective part of the residency.

4. Introduction to teaching of medical students in surgical pathology is an essential aspect of this year of training.

5. Experience in various laboratory specialties is

gained through the seminar program (see above). This involves emphasis on relations between human diseases and laboratory findings. In these seminars subjects for discussion involve clinical chemistry, microbiology, immunology, pathologic physiology, hematology, neuropathology and general gross and microscopic pathology. The seminars are concerned principally with discussion of current case problems.

Second Year of Residency

1. The major part of the time is devoted to microscopic surgical pathology and cytopathology. All descriptions and diagnoses, after consultation with the pathology attending staff, are the responsibility of the residents.
2. There is assigned responsibility for assisting first-year residents with gross post-mortem procedures and gross surgical pathology.
3. The resident is responsible for preparation and interpretation, with attending staff consultation, of frozen sections for rapid diagnosis during surgical procedures.
4. The resident continues to attend all seminars.
5. Research, if previously undertaken, is continued. At this stage, if serious interest in research becomes apparent, technical assistance is assigned to facilitate the investigation and the resident assumes responsibility for direction of one or more research technicians.
6. The resident becomes more active in the teaching of pathology to medical students in the hospital as surgical clerks.
7. The resident is assigned to management of the pathologic aspects of the Tumor Clinic, which is a consultation clinic concerned with the diagnosis and treatment of problem cases.

Third Year of Residency

1. The first assignment is for 6 months in the Department of Microbiology, learning diagnostic procedures in virology, bacteriology, mycology and parasitology.
2. The second 6 months is spent in the Department of Biochemistry, learning principles, instrumentation and procedures related to clinical biochemistry.
3. The resident continues attendance at all seminars.
4. The resident continues rotation on the post-mortem service.
5. The resident, if interested, continues research with the aid of technical assistants.
6. The resident begins teaching the formal course for second-year medical students as an instructor on the faculty of the Rush Medical College and continues teaching surgical pathology to medical students serving as clinical clerks in the hospital.
7. Upon completion of the first-year traineeship and this third year, the resident is Board eligible.

Fourth Year of Residency

1. The first assignment is for 6 months in the De-

partment of Hematology under the direction of Dr. Frank Trobaugh. Emphasis is placed upon hematology and blood bank procedures pertaining to direct patient care in which the resident participates.

2. The resident attends hematology rounds.
3. The resident continues rotation on post-mortem service.
4. The resident assumes responsibility for conduct of seminars of special interest.
5. The resident continues attendance at all seminars.
6. The resident continues research with aid of technical assistants, when indicated, and if his interest in research persists.
7. The resident continues teaching of second, third and fourth-year medical students.

Fifth Year of Residency

1. The resident continues to add to his experience in surgical pathology and cytopathology by concern with daily diagnostic problems.
2. The resident continues rotation on post-mortem service.
3. The resident continues attendance at all seminars and conducts those of special interest.
4. The resident continues research and teaching as in the fourth year program.
5. These activities allow the resident at least one-half of his time for research or further specialty training in accordance with his choice. Excellent opportunities are available in cytopathology, electron microscopy, neuropathology and various aspects of clinical pathology.
6. Special fellowships are available.

Sixth Year of Residency

1. The resident functions as chief resident and is responsible for the direction of the pathology resident staff.
2. The resident continues to gain experience with the difficult and unusual problems in the various fields of pathology.
3. The resident assists in supervision of the post-mortem service.
4. The resident is given the responsibility for conduct of selected staff conferences.
5. The resident continues to attend all seminars and continues research and teaching, as before, with a few assigned formal lectures in the second-year course for students at the Medical College.
6. The resident usually prepares research material for publication, having had five successive years, part-time, at research. As a rule, it takes about this much uninterrupted time to do a piece of original research.
7. The resident is ordinarily recommended for appointment as an Assistant Professor of Pathology, Rush Medical College.
8. Special fellowships are available.

Variations

This resident program is flexible and the years, as given, need not necessarily be in sequence or for the total time indicated. Also, for those with particular interests, the fifth and sixth years may be principally spent in research or in some special field of anatomic or clinical pathology.

Other Types of Resident or Resident-Fellow Training

Residents who wish to be trained primarily or exclusively in special fields such as clinical chemistry or hematology may make separate arrangements with the attending biochemists, hematologists or others who will assume principal responsibility for their training, using such parts of the outlined program as seem desirable to complement their individual specialty programs.

Residents who wish to be trained primarily for the practice of medicine or for careers in academic medicine are welcome in this program.

Student fellowships and other types of fellowships are available for those who do not want to follow the full schedule of formal resident training.

Residents in the programs of the military services and in the Berry Plan are welcome and many have been assigned here.

Graduate students in one of the basic medical sciences may, when qualified, participate in this program.

The American Board of Pathology

This program is fully approved for training in anatomic and clinical pathology by the American Board of Pathology. Approval is given for the appointment and training of two first-year post-doctoral trainees and nine residents. All residents upon completion of training have been qualified for examinations by the American Board of Pathology and have all been certified following examination.

Scope of Laboratory Experience and Responsibility

The Department of Pathology is divided into several sections. The principal patient service sections participating in this program are autopsy pathology, surgical pathology and cytopathology.

About 650 autopsies are done each year. No intern or resident is allowed more than 50-60 autopsies each year—but they are done thoroughly and with close attending staff assistance through completion of the protocol for permanent binding.

About 10,000 surgical specimens are studied grossly and microscopically each year. The two residents assigned each year to surgical pathology are responsible for completion of these reports under close attending staff supervision. They are also responsible, with attending staff consultation, for about 1,000 rapid frozen section diagnoses during surgical procedures each year.

About 11,000 cytopathology specimens are

screened by a staff of cytotechnologists each year. Of these, the daily problems are submitted to residents for evaluation and then to the attending staff for final opinion.

During assignments to the Department of Biochemistry, the trainee and resident encounter instruments and procedures involved in practically every determination in clinical chemistry. They are encouraged to learn procedures by apprenticeship at the bench and to understand the significance of the results from a diagnostic viewpoint. There is less emphasis upon technical details than upon the overall management of a clinical chemistry laboratory.

During assignments to the Department of Microbiology, almost every diagnostic procedure is encountered where there is relevance to virology, serology, bacteriology, mycology and parasitology. Again, emphasis is placed upon laboratory operation rather than technical details but there is considerable time for observation of skilled technicians at the bench during rotation through each of the sections indicated above.

During assignments to the Section of Hematology, there is an excellent opportunity to assist in patient management, to do bone marrow preparations and to study blood smears. Other hematologic procedures in great variety and technical detail are carried out regularly in these laboratories. This is an especially valuable experience in correlation of clinical and laboratory findings. During this period, time is usually spent in the blood bank where an opportunity to learn the details of operation of a modern and very active facility of this type is given.

For research training, the Division of Pathology has several well-equipped laboratories involving about 20 technicians and more than 10,000 square feet of floor area. The animal laboratories house several hundred mice and rats, several hundred rabbits and over one hundred larger animals. In addition, there are ancillary facilities such as surgical operating rooms, x-ray rooms, autopsy rooms, etc. Special pathology research laboratories are designed and equipped for the following purposes: virology, histochemistry, electron microscopy, photomicrography, ultracentrifugation, tissue fractionation, visible and ultraviolet spectrophotometry, flame spectrophotometry, atomic absorption spectrophotometry, column and paper chromatography, high voltage electrophoresis, tissue culture, amino acid chromatography and gas chromatography. These laboratories and instruments are available to support research interests of the resident staff. The required technical assistance is equally available and is of great importance in the research training program. Though research is not a required part of the program, some of the house staff elect to do research and, after leaving us, most agree that the time spent has been beneficial in helping to solve laboratory and administrative problems encountered in their post-resident careers.

Department of Plastic and Reconstructive Surgery
John W. Curtin, M.D., Chairman

Bradley, Craig B.A., M.D. Adjunct Attending, PSLH; Instructor, RMC	Greeley, Paul W., A.B., M.D. Consulting PSLH; Emeritus Professor, RMC	McNally, Randall E., B.S., M.D. Associate Attending, PSLH; Associate Professor, RMC	Monroe, Clarence W., B.S., M.D. Senior Attending, PSLH; Professor, RMC
Curtin, John W., B.S., M.D. Senior Attending, PSLH; Professor, RMC			Simmons, Robert D., M.D. Adjunct Attending, PSLH; Instructor, RMC

A two-year graded training program in General Plastic and Reconstructive Surgery is offered under the direction of Dr. John W. Curtin, Clinical Professor of Surgery and Chairman of the Department of Plastic Surgery of Rush Medical College. Three additional Board Certified Plastic Surgery Staff members aid in teaching. The program is fully accredited by the Tripartite Conference Committee on Graduate Training sponsored by the American Medical Association, the American College of Surgeons, and the American Board of Plastic Surgery. In order to be considered for appointment, the applicant must have completed a minimum of three years acceptable training in general surgery in order to comply with the requirements of the American Board of Plastic Surgery.

There are two appointments in Plastic Surgery, a senior and a junior residency at Presbyterian-St. Luke's Hospital. One resident is selected to start training on the 1st of July of each year.

At present an average of over 1,000 plastic surgery patients are operated upon annually at this institution. The scope of plastic surgery cases, embracing a wide variety of ages and types, are of a private category, clinic type and those emanating from the Mile Square Health Center. A House Service exists where bed privileges and special operative times are offered to residents. All of the patients in this Hospital, however, are available and used for teaching purposes. The residents' case load comes from an active plastic surgery free clinic and is under the supervision of the Attending Staff.

The residents will be trained in overall preoperative surgical diagnosis and care, the surgical treatment and the postoperative care of patients being amenable to treatment by plastic surgery. More than adequate experience in the various methods, in excisional and reparative surgery of the scalp, face, orbits, nose, oral cavity, neck, trunk and extremities is seen. In addition, experience is gained in the management of neoplasms of the head and neck, cosmetic surgery, facial trauma, surgery of the hand, burns and congenital abnormalities of the extremities and genitalia. Cooperation with other departments (orthopedics, general surgery, genitourinary, gynecology, bronchoesophagology) allows

exceptional experience in reconstruction of the esophagus, larynx, trachea, vagina, abdomen and the repair of extensive encephalocele and myelomeningocele.

The residents are given ample opportunity to perform major procedures under the supervision of the Attending Staff. As the resident demonstrates increasing ability an increased amount of responsibility is delegated to him. So that the resident acquires skill and judgment in all phases of his work, emphasis is placed on personal instruction at the bedside, in the clinic, in the operating room and in the pathology and anatomy laboratories. Research facilities are available in the hospital and medical school. Active participation in research programs is mandatory. Attendance and participation in other hospital teaching conferences is stressed, including weekly pathological conference, tumor conference, surgical research projects, hand seminars and journal reviews. The resident also spends a period of each week in private offices of the Attending Plastic Surgery Staff.

A combined Head and Neck Tumor Program has been initiated and involves the Departments of Surgical Oncology, Otolaryngology and Plastic Surgery. Outside affiliations involve the plastic surgery resident spending a three-month period at Passavant Hospital, Chicago. Here, while on the service of Drs. Sumner Koch, John Bell and William Stromberg, the resident is involved in the care of acute and reconstructive hand surgery cases. A two-month rotation to the Burn Unit of Cook County Hospital under the direction of Dr. John Boswisk is also included during the residency period.

Both the junior and senior residents are afforded the opportunity to attend major surgical meetings during the year. They are encouraged to present papers on their own or in conjunction with the attending staff. A two-week all-expense Crown Scholarship trip is given the senior resident to visit various outstanding plastic surgery centers in order to broaden his concepts.

A resident will be given an appointment as Clinical Instructor in Surgery in the Department of Plastic Surgery for the entire training program.

Department of Therapeutic Radiology

Frank R. Hendrickson, M.D., Chairman

Chung-Bin, Anthony, B.S., M.S.C.
Senior Attending, PSLH;
Associate Professor, RMC
(Diagnostic Radiology)
Hendrickson, Frank R., B.A., M.D.
Senior Attending, PSLH;
Professor, RMC
(Obstetrics and Gynecology)

Kartha, Ponnunni K. I., B.S.C., M.S.C.
Associate Attending, PSLH;
Assistant Professor, RMC
Kirchner, Arthur B., B.S., M.D.
Adjunct Attending, PSLH;
Instructor, RMC
Kline, Thorton C., A.B., M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC

Lee, Myung-Sook, M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC
Mehra, Yashbir, M.B.B.S.
Assistant Attending, PSLH;
Assistant Professor, RMC
Millburn, Lowell F., B.S., M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC
Phillips, Richard L., M.D.
Visiting Associate Professor,
RMC

Saxena, Virenda S., B.S., M.B.B.S.
Senior Attending, PSLH;
Associate Professor, RMC
Shirazi, Syed J. H., M.B.B.S.
Adjunct Attending, PSLH;
Assistant, RMC
Wachtor, Thomas E., B.S., M.S.
Assistant Professor, RMC

The following physician training programs are offered:

1. A three year program leading to qualification for American Board of Radiology examination in Therapeutic Radiology.
2. A one year program which is part of the general radiology residency.
3. A fourth year of special training in therapeutic radiology and/or clinical use of radioactive isotopes for those desiring such special augmentation of previous training or experience.

Facilities The Radiotherapy Section consists of an integrated area of 6,500 square feet devoted to clinical problems and 1,000 square feet of research space. Within this area are two supervoltage teletherapy machines, two orthovoltage, one superficial treatment machine, and an image amplified simulator to permit accurate localization of treatment volumes. The radium laboratory contains 750 mgms. of radium or isotope equivalent for clinical use. An electronic shop is located within the department for maintenance, design, and production of special equipment. The research area includes a tissue culture laboratory, animal facilities, a physics laboratory, plus general laboratory space.

Clinical Material Presbyterian-St. Luke's Hospital registers over 1,600 new cancer patients a year with more than half receiving some form of radiotherapy. There are more than 15,000 treatment visits and 2,000 follow-up visits a year. All patients are seen initially by the radiotherapy house staff with preliminary evaluation and treatment planning being completed before discussion and finalization of the treatment program with the attending staff.

Patients are admitted to the radiology service directly and operating room priority is assigned for

radiotherapeutic operating room procedures. Community hospitals within the Medical Center network permit rotation and exposure to the problems of community hospital practice.

Research There is an active clinical and basic research program in the areas of (1) preoperative radiotherapy, (2) combined chemotherapy and radiotherapy, and (3) optimum fractionation and protraction. Financial support is by the National Institutes of Health, the American Cancer Society, and local institutional funds. Active participation in these programs by residents and fellows is strongly encouraged. Opportunities for independent investigation are available.

Teaching Medical students from Rush and other schools rotate through the department and offer a stimulus as well as a teaching challenge. In addition, interns from surgery have an elective one month rotation into Therapeutic Radiology. The School of Radiotherapeutic Technology offers still another teaching opportunity for motivated staff.

Resident Responsibility The training program is basically related to the clinical material. Assignment of all new patients is made for evaluation and treatment planning. These plans for all new patients and any problem patients are reviewed daily with the entire attending and resident staff. The daily treatment and follow-up is performed in conjunction with the attending staff. The senior resident is responsible for all Health Center patients with consultation if desired. Adequate material and opportunity is present to ensure development of proficiency in all necessary external treatment and implant modalities. Approximately one-fourth of the training period is devoted to radium and isotope training.

Department of Urology

Jack E. Mobley, M.D., Chairman

Callahan, Daniel H., B.S., M.D.
Associate Attending, PSLH;
Assistant Professor, RMC
Cottrell, Thomas L. C., B.S. M.D.
Consulting, PSLH; Visiting
Assistant Professor, RMC
Deniz, Engin, M.D.
Adjunct Attending, PSLH;
Instructor, RMC

Flanagan, Malachi J., M.D.
Associate Attending, PSLH;
Associate Professor, RMC
Graf, Edwin C., B.S., M.D.
Senior Attending, PSLH;
Associate Professor, RMC
McKiel, Charles F. Jr., A.B., M.D.
Senior Attending, PSLH;
Professor, RMC

Merricks, James W., M.D.
Emeritus, PSLH;
Emeritus Professor, RMC
Mobley, Jack E., B.S., M.D.
Senior Attending, PSLH;
Professor, RMC
Papierniak, Frank B., B.A., M.D.
Associate Attending, PSLH;
Assistant Professor, RMC

Suliman, John S.D., M.B.B.C.
Assistant Attending, PSLH;
Assistant Professor, RMC
(General Surgery)
Valenta, James C., M.D.
Assistant Attending, PSLH;
Assistant Professor, RMC

The Department of Urology offers a four year residency designed to provide a high degree of competence in all aspects of genito-urinary surgery. The residency is fully approved by the residency review committee of the American Medical Association. The first year is spent in general surgery or nephrology and the subsequent three years in progressive responsibility in urology.

The general surgical year is important to the trainee. Six months of general abdominal surgery are provided, familiarizing the candidate with basic surgical principles, operative technique, and providing invaluable experience in overall patient care. During the second six months the first year resident rotates at monthly or bimonthly intervals through some of the surgical specialties. A special effort is made to provide rotations of interest to the trainee, and to include those specialties which are of special value to a urologist.

During the second year, the first spent in urology, the candidate is exposed to the intensive teaching program in the Department of Urology described below. He is instructed under close staff supervision in the performance of cystoscopy and the various special diagnostic techniques which are the backbone of the specialty, and gains wide experience in urologic surgery, usually as first or second assistant. The second year resident has wide and primary responsibilities in patient care, but is encouraged to conduct some research in association with a member of the staff in the urology research laboratory. Such research may be continued in future years.

The third year resident (second year in urology) is in charge of the private in-patient service and is first assistant at surgery on private patients. He begins to perform major urological surgery under close supervision by members of the staff and receives a great deal of personal attention and training. He helps formulate the material to be presented in various teaching rounds.

The senior resident is in overall charge of the clinic service. He makes daily ward rounds with the second year urology resident and the general surgery resident, intern and medical students assigned to the urology service. Although attending urologists are always available for counsel and assistance, the senior resident is encouraged to pursue a vigorous

and self-reliant course of patient care and teaching.

By choosing the patients to be presented for evaluation and discussion, the senior resident structures many of the teaching conferences held in the department.

The out-patient clinics of the department are held three afternoons a week. The new patient and follow-up care clinics are held Monday and Wednesday afternoons at 1:00 P.M. They average 35 to 45 patients an afternoon. The pediatric urologic clinic is held each Thursday afternoon at 1:00 P.M. The out-patient cystoscopy clinic is held on Tuesday morning. These clinics are held under the direction of the senior resident in urology, who has an attending urologist available to him at all times for consultation.

Attendance of all residents and students on the urology service is required at the teaching conferences of the department. Several of these are held weekly. The pyelogram conference is held Tuesday afternoon in conjunction with the Department of Radiology. Interesting current x-rays are reviewed and discussed. On Tuesdays formal rounds are held, when three or four in-patients are presented and discussed by all members of the staff. On Thursday a joint conference is held with the Renal and Nutrition Section, where patients with metabolic disease of interest to the urologist are discussed. This leads to dialogue on the evaluation and management of patients with stones, infection, various non-obstructive renal diseases, and renal failure from all causes.

Pediatric urology conferences are held three times a month in conjunction with the Division of Pediatrics. A wide insight is gained into newly recognized diseases seen in this age group. Changes in the concept of treatment often are emphasized at these conferences, and various common problems, such as the management of neurogenic bladder in the child, are periodically reviewed in depth.

Pathology rounds are held twice a month. All residents on the urology service review microscopic sections of current surgical material.

The journal club meets two times a month. At one session articles of interest in the current *Journal of Urology* are reviewed and discussed. At the other session one assigned topic is discussed in detail, and three or four particularly stimulating articles are

discussed at some length. A member of the attending staff acts as moderator.

All residents on the urology service are expected to attend weekly surgical grand rounds, and any of the other teaching conferences offered at the hospital that may be of interest, such as the informal course in surgical physiology held on Saturdays.

Out of town speakers (five or six a year) are invited to give special rounds. These may deal with new research, new surgical or diagnostic techniques,

or new concepts in treatment. Every effort is made to attract the author of new development as speaker.

The resident also is required to attend and participate in the regular meetings of the Chicago Urological Society.

Applications for the urology residency, to begin after completion of the internship, may be submitted at any time during the internship, the fourth year of medical school, or during intervening military service.

